OPERATION MANUAL

Dear SHARP customer

Thank you for your purchase of the SHARP LCD colour TV product. To ensure safety and many years of trouble-free operation of your product, please read the Important Safety Precautions carefully before using this product.

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Precautions for daily use

Observe the following items

Maintenance of the cabinet

- When cleaning the cabinet, use a soft cloth (made of cotton, floss, etc.) to clean gently.
  Do not use a dry or damp rag mixed with chemicals, as this could cause the ingredients of the cabinet body to deteriorate or crack.
- Be careful not to use an abrasive cloth for cleaning or clean with excessive force, as this could scratch the surface of the cabinet.
- If the cabinet is greatly soiled, clean with a soft cloth (made of cotton, floss, etc.) soaked with a small amount of diluted neutral detergent and wrung out, and then clean with a soft dry cloth.
- Because the cabinet is made of plastic, solvents such as benzene, alcohol or thinner could cause it to deteriorate, or make its coating come off. Therefore do not use such solvents to clean the cabinet.
- Because plasticizer is included in the plastics, deterioration or the coating peeling off could occur when the cabinet comes into contact with some substances. Therefore keep it away from volatile substances such as insecticide. In addition, do not let it come into contact with objects made of rubber, resin, etc. for a long time.

Maintenance of the LCD panel

- Before cleaning the LCD panel, be sure to turn off the TV set and unplug the power cord from the outlet.
- When cleaning the LCD panel, use a dry and soft cloth (made of cotton, floss, etc.) to clean the surface of the LCD panel gently. For protecting the LCD panel, do not clean with a dirty cloth, detergent, or a dry or damp rag mixed with chemicals, as this could cause peeling of the panel surface.
- Be careful not to clean with an abrasive cloth or with excessive force, as this could cause the panel surface to be scratched.
- If the LCD panel is greatly soiled, clean it gently with a soft cloth (made of cotton, floss, etc.) soaked with a small amount of water (Do not clean with excessive force, so as to avoid the scratch of the panel surface).
- If dust sticks on the surface of the LCD panel, clean the panel with a commercially available cleaning brush (anti-static brush).

Important safety precautions

- Cleaning — Unplug the AC cord from the AC outlet before cleaning the product. Use a damp cloth to clean the product. Do not use alcohol cleaners, spray cleaners or chemical cloth when cleaning because these types of materials may damage the product.

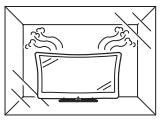
- Water and moisture — Do not use the product near water, such as bathtub, washbasin, kitchen sink, laundry tub, swimming pool and in a wet basement.

- Do not place vases or any other water-filled containers on this product. The water may spill onto the product causing fire or electric shock.

- Stand — Do not place the product on an unstable cart, stand, tripod or table. Doing so can cause the product to fall, resulting in serious personal injuries as well as damage to the product. Use only a cart, stand, tripod, bracket or table recommended by the manufacturer or sold with the product. When mounting the product on a wall, be sure to follow the manufacturer's instructions. Use only the mounting hardware recommended by the manufacturer.

- When relocating the product placed on a cart, it must be moved with utmost care. Sudden stops, excessive force and uneven floor surface can cause the product to fall from the cart.

- Ventilation — The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a bed, sofa, rug or other similar surface, since they can block ventilation openings. This product is not designed for built-in installation; do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.



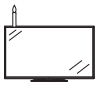
- In case the product is dropped and the cabinet is damaged, be sure to turn off the power of the product, and unplug the power cord. If you continue to use the product, it may cause fire or electric shock.

- Do not open the rear cover of the cabinet to reconstruct the circuits. There exists high voltage within the cabinet and it may cause electric shock and injury. If maintenance is required, contact your dealer.

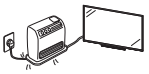
- The LCD panel used in this product is made of glass. Therefore, it can break when the product is struck forcefully or with a sharp object. If the LCD panel is broken, be careful not to be injured by broken glass.

- Heat sources — Keep the product away from heat sources such as radiators, heaters, stoves and other heat-generating products (including amplifiers)

- To prevent fire, never place any type of candle or naked flames on the top or near the TV set.

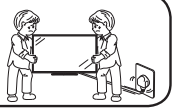


- To prevent fire or shock hazard, do not place the AC power cord under the TV set or other heavy items.



- Do not place heavy objects on this product or stand on it. Doing so could cause injury if the product overturns. Take special care near children and pets.

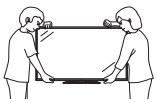
- Unplug the power cord before you move the TV set. If not unplugged beforehand, the power cord may become damaged and cause electric shock.



The LCD panel is a very high technology product with 2,073,600 pixels, giving you fine picture details.
Due to the very large number of pixels, occasionally a few non-active pixels may appear on the screen as a fixed point of blue, green or red.
This is within product specifications and does not constitute a fault.

Precautions when transporting the TV

- When transporting the TV, never carry it by holding or otherwise putting pressure onto the display.
  Be sure to always carry the TV by two people holding it with two hands — one hand on each side of the TV.



- Do not display a still picture for a long time, as this could cause an afterimage to remain.

- Install the product on the place where the AC cord can be unplugged easily from the AC outlet.

NOTE

- The above are pictures for reference only; the actual item might be different.

3D glasses

Prevention of accidental ingestion

- Keep the accessory out of the reach of small children. Small children can accidentally swallow these parts.
- If a child accidentally swallows any of these parts, seek immediate medical attention.

Do not disassemble

- Do not disassemble the 3D glasses. Do not modify the 3D glasses.

Caution for button battery

- Do not expose the battery to excessive heat, sunlight or the fire, etc.
- Replace only with the same type of battery. The battery may explode if improperly replaced.
- Please pay special attention to the polarities of the battery. Improper installation may cause the damage of the battery or leads to the leakage of the chemical material thus cause the fire and body damage.

Handling the 3D glasses

- Do not drop, exert pressure on, or step on the 3D glasses. Doing so may damage the glass section, which may result in injury.
- Be careful not to trap your finger in the hinge section of the 3D glasses. Doing so may result in injury.
- Pay special attention when children are using this product.

Using the 3D glasses

- The 3D glasses vision should be limited. Security advisory establishes a maximum of 3 hours visualization, and in any case no more than one show length, break included.
- Use only the 3D glasses recommended for this TV.
- Use the 3D glasses only for the specified purpose.
- Do not move around while wearing the 3D glasses. The surrounding area appears dark, which may result in falling or other accidents that may cause injury.

Caring for the 3D glasses

- Use only soft cloth to clean the lenses. Remove dust and soil from the cloth. Any dust or other soiling on the cloth may result in scratches on the product. Do not use solvents such as benzene or thinners as doing so may cause the coating to peel off.
- When cleaning the 3D glasses, take care not to allow water or other fluids to come into contact with the glasses.
- When storing the 3D glasses, avoid very humid or hot locations.

Viewing 3D images

- If you experience dizziness, nausea, or other discomfort while viewing 3D images, discontinue use and rest your eyes.
- Do not use the 3D glasses if they are cracked or broken.

Keep away from heat

- Do not place the 3D glasses in a fire, near heat or in an area with high humidity. This product may cause a fire or injury from ignition or explosion of the button battery.

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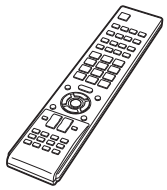
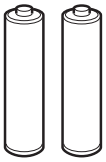
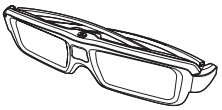
powered by espial

http://www.espial.com

Accessories

Supplied accessories

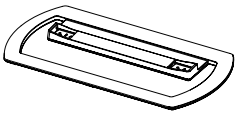
Make sure the following accessories are provided with the product.

<table>
<tr><td>Remote control unit</td><td>“AAA” size alkaline battery (×2)</td><td colspan="2">3D glasses accessories (×2)</td></tr>
<tr><td> 
Used with batteries inserted.
Page 18</td><td> 
Page 22</td><td colspan="2"> 
3D Glasses (×2)

Button Battery *
CR2025 (×2)
* Already installed in 3D glasses.
Page 55</td></tr>
<tr><td colspan="4">Stand unit</td></tr>
<tr><td colspan="2">LC–46/52LX650H

Stand

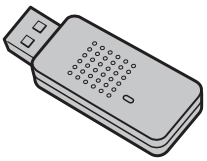
Supporting post

screws (×12)
Page 12</td><td colspan="2">LC–60LX650H
 
Stand

Supporting post

screws (×12)
Page 13</td></tr>
<tr><td colspan="2">Safety restraint</td><td colspan="2">Wireless LAN USB adapter</td></tr>
<tr><td colspan="2">LC–60LX650H

Clamps
(×2)

Screws for
clamps (×2)
Page 14</td><td colspan="2"> 
Page 76</td></tr>
<tr><td colspan="2">Operation manual</td><td colspan="2"></td></tr>
<tr><td colspan="2"> </td><td colspan="2"></td></tr>
</table>

Optional accessories

The listed optional accessories are available for this LCD colour TV. Please purchase them at your nearest shop.

- Additional optional accessories may be available in the near future. When purchasing, please read the newest catalogue for compatibility and check the availability.

Part name	Part number	Note
3D glasses	AN-3DG30	Rechargeable

NOTE

- The optional glasses are different from the supplied ones. Please refer to the operation manual of the option for the operation details.

Preparation

Attaching the stand unit

- Before attaching (or detaching) the stand, unplug the AC power cord from the AC power outlet.
- Before performing work, spread cushioning over the surface on which you will be laying the TV. This will prevent it from being damaged.

CAUTION

- **Attach the stand in the correct direction.**
- **Be sure to follow the instructions. Incorrect installation of the stand may result in the TV falling over.**

■ LC-46LX650H/LC-52LX650H

Step 1 below is only applicable to LC–46LX650H

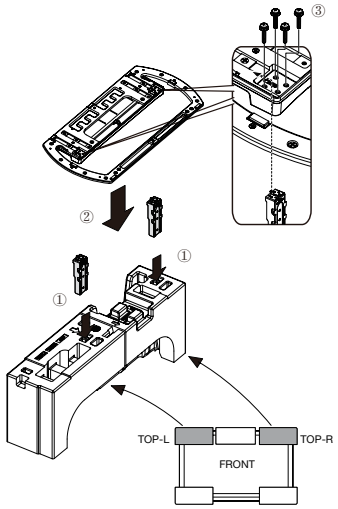
1

① Insert the supporting post into the foam blocks TOP–L and TOP–R , as shown in the figure below.

② As illustrated in the following figure,attach the supporting post onto the stand.

③ Insert the eight screws into the eight holes on the bottom of the stand, and tighten them.

- To install the stand correctly, hold the stand with one hand securely, and tighten the screws with the other hand.



Step 1 below is only applicable to LC–52LX650H

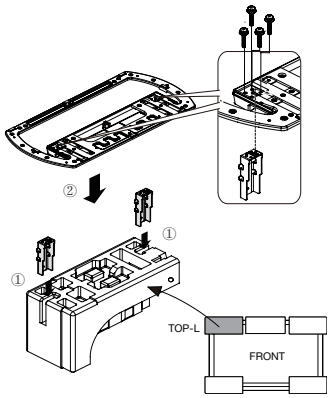
1

① Insert the supporting post into the foam block TOP–L, as shown in the figure below.

② As illustrated in the following figure, attach the supporting post onto the stand.

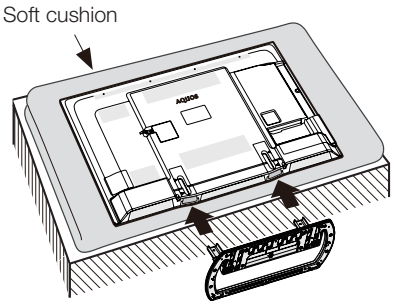
③ Insert the eight screws into the eight holes on the bottom of the stand, and tighten them.

- To install the stand correctly, hold the stand with one hand securely, and tighten the screws with the other hand.



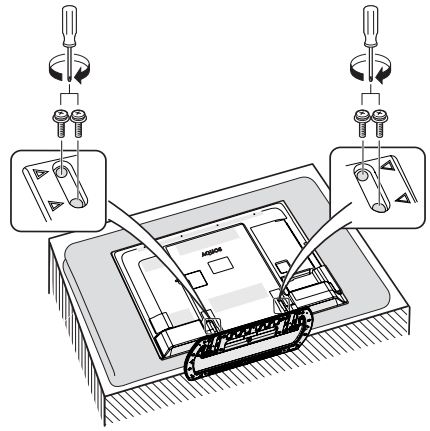
2

Insert the base into the slot on the bottom of the TV(while holding the base to avoid it falling over).



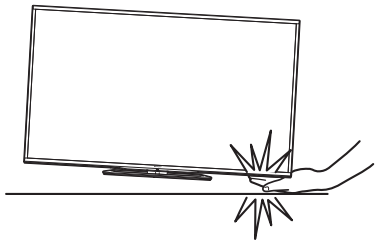
3

Insert the four screws into the four holes on the back of the TV, and tighten them.



NOTE

- When installing the stand, you need to put your TV on a flat surface. Before that, put a soft cushion on the surface.
- The angle of the stand is not adjustable.
- To detach the stand unit, perform the steps in reverse order.
- A screwdriver is not supplied with this product.
- During installation, please be careful to avoid getting your hand trapped between the TV bottom and the floor.

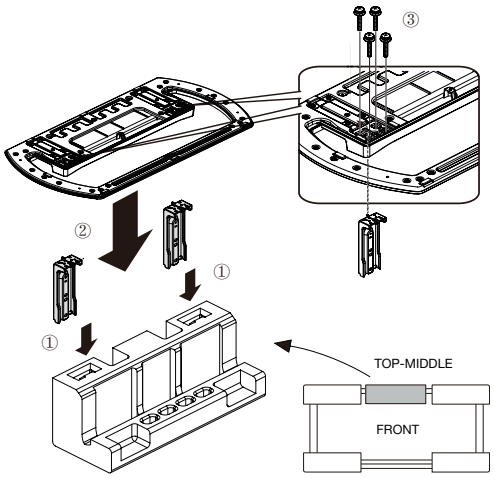


LC–60LX650H

1

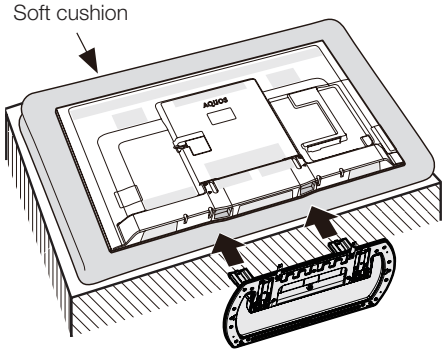
① Insert the supporting post into the foam blocks TOP–MIDDLE, as shown in the figure below.
② As illustrated in the following figure, attach the supporting post onto the stand.
③ Insert the eight screws into the eight holes on the bottom of the stand, and tighten them.

- To install the stand correctly, hold the stand with one hand securely, and tighten the screws with the other hand.



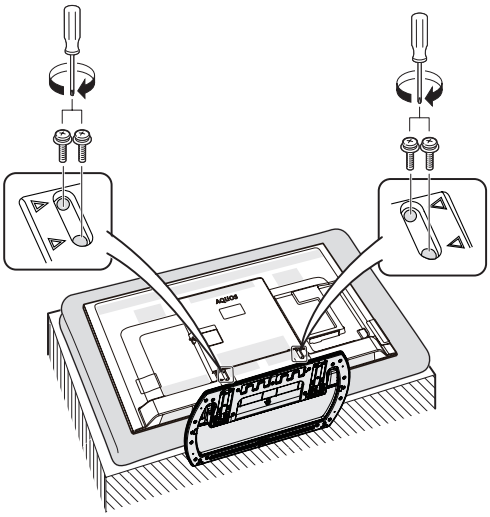
2

Insert the base into the slot on the bottom of the TV(while holding the base to avoid it falling over).



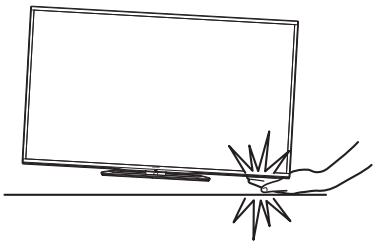
3

Insert the four screws into the four holes on the back of the TV, and tighten them.



NOTE

- When installing the stand, you need to put your TV on a flat surface. Before that, put a soft cushion on the surface.
- The angle of the stand is not adjustable.
- To detach the stand unit, perform the steps in reverse order.
- A screwdriver is not supplied with this product.
- During installation, please be careful to avoid getting your hand trapped between the TV bottom and the floor.



Protection against overturning

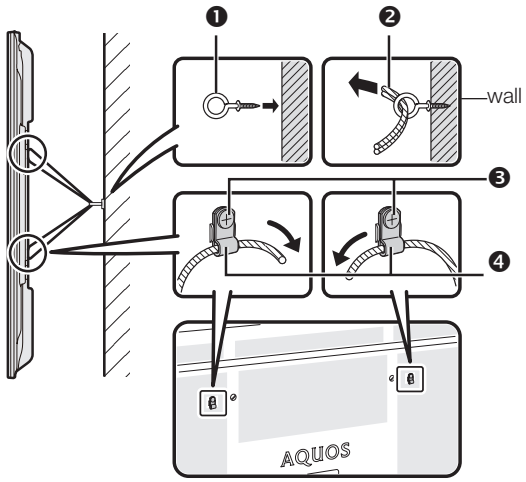
■ Applicable to LC–60LX650H only

There is a danger of the product overturning in the case of a disaster or sudden collision. Carry out the following tip-resistant measurement for your safety.

Anchoring the TV to the wall or a pillar

1. Use the 2 screws (supplied) to attach the 2 clamps (supplied) to the rear of the TV.
2. Attach the TV to the wall using extra strong ties (commercially available).

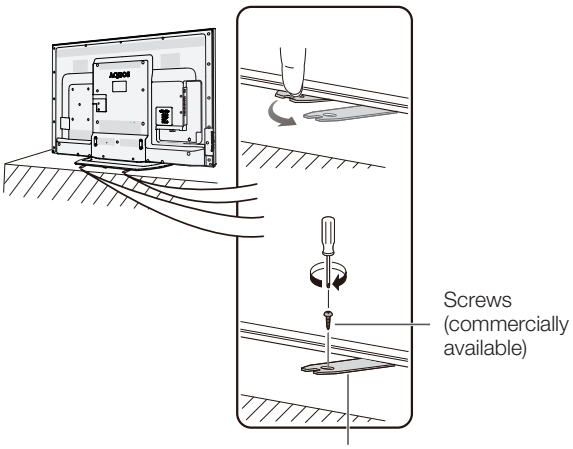
View from the top



❶ Cup hook (commercially available)
❷ Tie (commercially available)
❸ Screws for attaching clamps (supplied)
❹ Clamps (supplied)

Fixing the TV to the table

1. Place the TV on the table.
2. Pull the attached restraining bracket out so that it is at a 90 degrees angle.
3. Insert commercially available screws in the holes of the restraining bracket and tighten the screws to secure the TV to the table.
   - Use commercially available screws of the proper size to firmly secure the TV.



NOTE

- When the attaching clamps is out of use, pull it in 90° so that hiding in the base.

CAUTION

- **As this product is heavy, use a table that is wide enough to support the product and capable of withstanding the product's weight. The table should be set where it will not be overturned.**
- Be sure to use at least two people when moving the TV.

Handling and precautions with the wall-mounted TV

- You can mount the TV on the wall using the optional bracket.
- For details, refer to the instructions supplied with the optional bracket.

CAUTION

- **This TV should be mounted on a wall only with a wall mount bracket recommended by SHARP. The use of other wall mount brackets may result in an unstable installation and may cause serious injuries.**
- **Installing the TV requires special skills that should only be performed by qualified service personnel. Customers should not attempt to do the work themselves. SHARP bears no responsibility for improper mounting or mounting that results in accident or injury.**

Using a SHARP recommended bracket to mount the TV

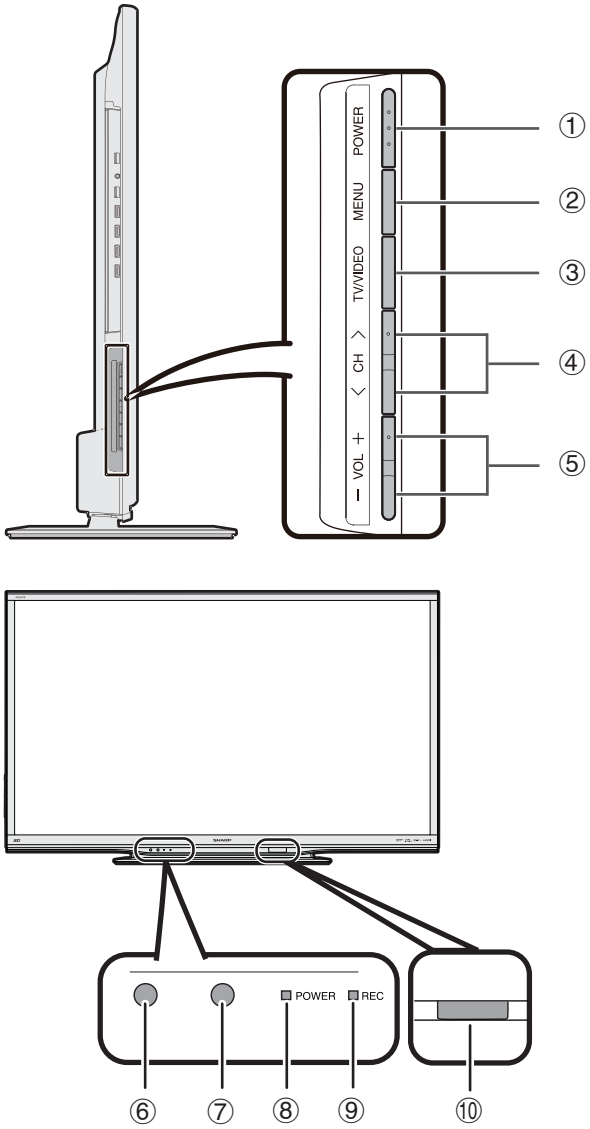
- You can ask a qualified service professional about using a SHARP recommended bracket to mount the TV to the wall.
- Carefully read the instructions that come with the bracket before beginning work.

NOTE

- If you want to mount the TV on the wall, use the screws provided with the wall-mount bracket to affix the bracket to the rear of the TV.

Part names

TV (Front / Side)



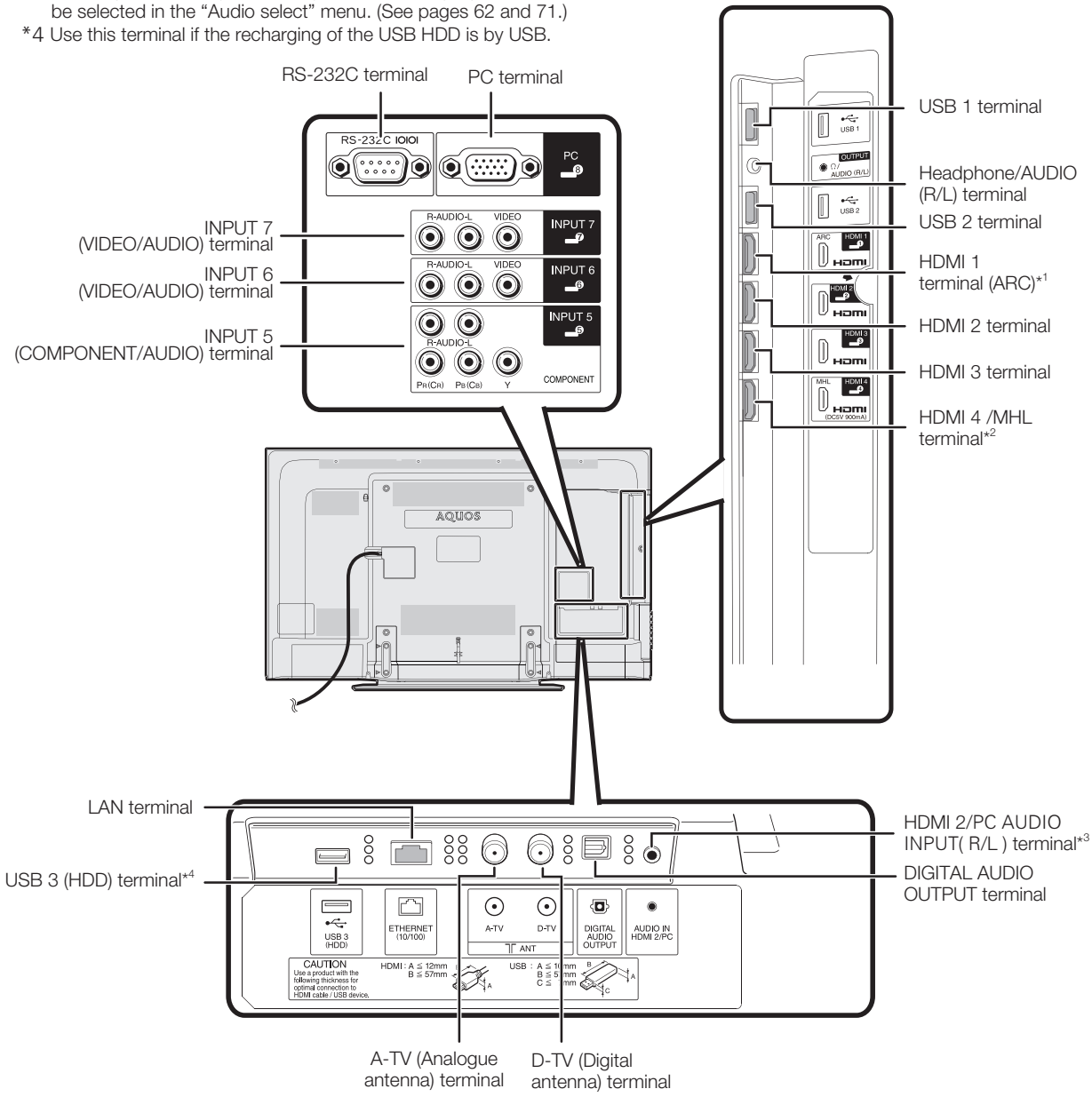
① **POWER** (On/Off) button
② **MENU** button
③ **TV/VIDEO** button
④ **CH** ∧/∨ (Channel up/down) buttons
⑤ **VOL** +/− (Volume up/down) buttons
⑥ Remote control sensor
⑦ **OPC** sensor*
⑧ **POWER** indicator
⑨ **REC** indicator
⑩ Infrared emitter

* **OPC**: Optical Picture Control (See page 41 for details.)

- The illustrations and on-screen displays in this operation manual are for explanation purposes and may vary slightly from the actual operations.
- The illustrations used throughout this operation manual are based on LC-46LX650H.

TV (Rear)

*1 Audio Return Channel (ARC) (See page 66.)
*2 Mobile High–Definition Link (MHL) can also be used. (See page 69.)
*3 The HDMI 2/ PC AUDIO INPUT(L/R) terminal share the same audio input terminal (HDMI 2/PC). However, the proper item must be selected in the “Audio select” menu. (See pages 62 and 71.)
*4 Use this terminal if the recharging of the USB HDD is by USB.

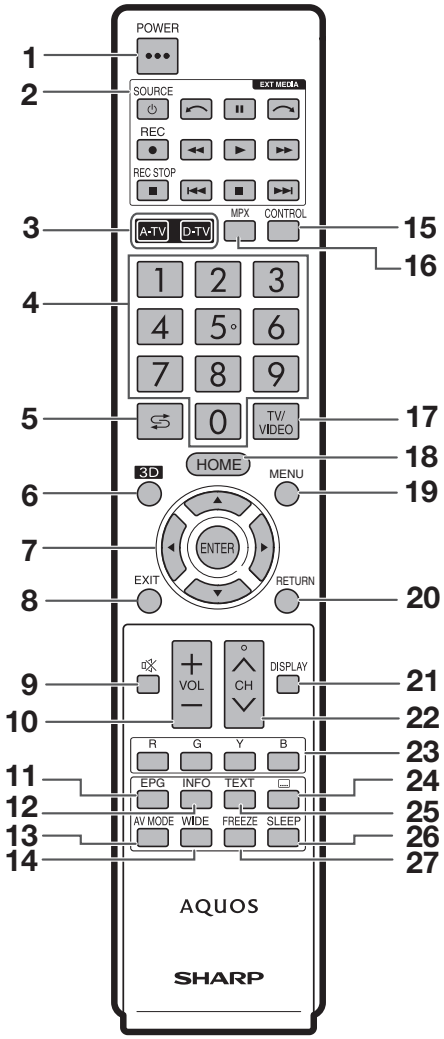


Regarding the headphone jack

- Use headphones with a stereo mini plug (Ø 3.5 mm).
- Be sure to unplug headphones from the jack when they are not in use.
- The speakers do not output volume when headphones are plugged in.
- The “Audio” menu cannot be operated when headphones are plugged in.
- You can set the volume to different levels for each input source.

Volume display when headphones are plugged in

Remote control unit



1 POWER (Standby/On)
To switch the power on and off. (See page 23.)

2 EXT MEDIA buttons
EXT MEDIA buttons are used for AQUOS LINK function and USB recording functions,etc.
- AQUOS LINK (See page 67.)
- USB recording (See page 82.)

3 A–TV (Analogue TV)
Press to access analogue TV mode. (See page 48.)

D–TV (Digital TV)
Press to access digital TV mode. (See page 48.)

4 0 – 9
Set the channel. (See page 27.)

5 Flashback
Press to return to the previous selected channel or external input mode. (See page 32.)

6 3D function (See pages 58 to 59.)

7 ▲/▼/◀/▶ (Cursor)
Select a desired item on the setting screen.

ENTER
Execute a command.

8 EXIT
Turn off the On-Screen Display.

9 (Mute)
Mute the sound. (See page 32.)

10 VOL + / –
Set the volume. (See page 27.)

11 EPG
D-TV only: To display EPG (Electronic Programme Guide) screen. (See pages 50 to 53.)

12 INFO
D-TV only: Display the programme information. (See page 49.)

13 AV MODE
Select a video/audio setting. (See page 40.)

14 WIDE
Change the wide image mode. (See pages 39, 71 and 93.)

15 CONTROL
Display a panel to operate some functions on the screen. (See pages 82, 89 and 93.)

16 MPX
Select the sound multiplex mode. (See page 34.)

17 TV/VIDEO (INPUT SOURCE)
Select an input source. (A-TV, D-TV, HDMI1, HDMI2, HDMI3, HDMI4, INPUT5, INPUT6, INPUT7, PC, USB media, Home network) (See pages 20, 61 to 62, and 85.)

18 HOME
Display the “HOME” screen for enjoying Internet connection and Home network functions, as well as performing settings for the TV. (See page 78.)

19 MENU
Displays the menu screen. (See page 25.)

20 RETURN
MENU mode: Return to the previous menu screen. (See page 25.)

21 DISPLAY
Displays the channel or input information.

22 CH∧/∨
TV input mode: Select the channel. (See page 27.)

23 Colour Buttons (R / G / Y / B)
The coloured buttons are used to select correspondingly to the coloured items on the screen. (e.g., AQUOS LINK, D-TV, USB media, Home network, EPG)

24 (Subtitle)
To turn the subtitles on/off. (See pages 33, 53 and 89.)

25 TEXT
D-TV only: To display MHEG-5 broadcasts. (See page 53.)

26 SLEEP
Set the sleep timer. (See page 37.)

27 FREEZE
Freeze a motion picture on the screen. (See page 32.)

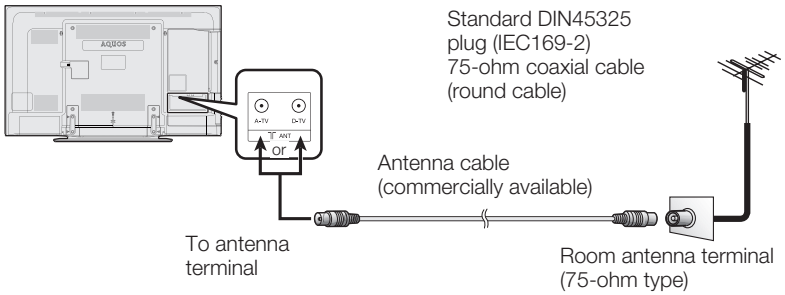
Before turning on the power

Notes on installing the TV

- Avoid direct sunlight and place the TV in a well-ventilated location.
- Place the TV in a level location.
- Do not turn on the power of the TV before connecting the AC cord.

1 **Connecting the antenna cable**

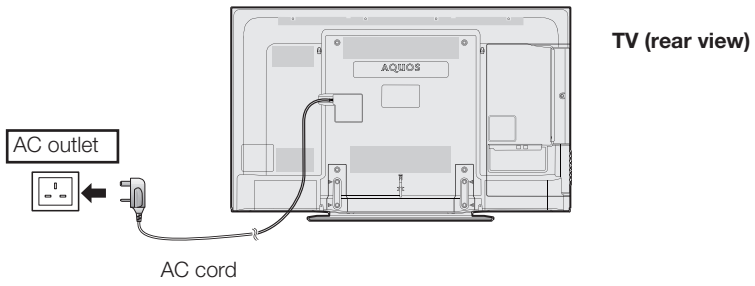
To enjoy a clearer picture, use an outdoor antenna. The following is a brief explanation of the types of connections that are used for coaxial cable.



2 **Connecting external devices**

See pages 20 to 21 for connecting external equipment, such as a VCR and DVD player.

3 **Plug the AC cord in to the AC outlet.**

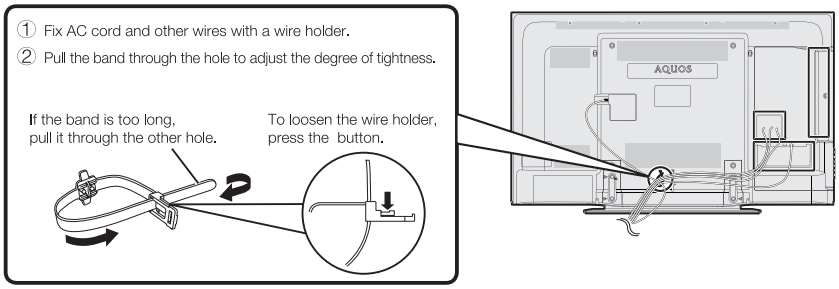


TV (rear view)

- Place the TV close to the AC outlet, and keep the power plug within reach.
- Disconnect the AC cord from the AC outlet if the TV will not be used for a long period of time.

4 **Bundling the cables**

As the picture illustrated, insert the cable clip into the hole on the TV, and put the cable into the cable clip for banding.


① Fix AC cord and other wires with a wire holder.
② Pull the band through the hole to adjust the degree of tightness.
If the band is too long,
pull it through the other hole.
To loosen the wire holder,
press the button.
AQUOS

CAUTION

- **TO PREVENT RISK OF ELECTRIC SHOCK, DO NOT TOUCH UN-INSULATED PARTS OF ANY CABLES WITH THE AC CORD CONNECTED.**

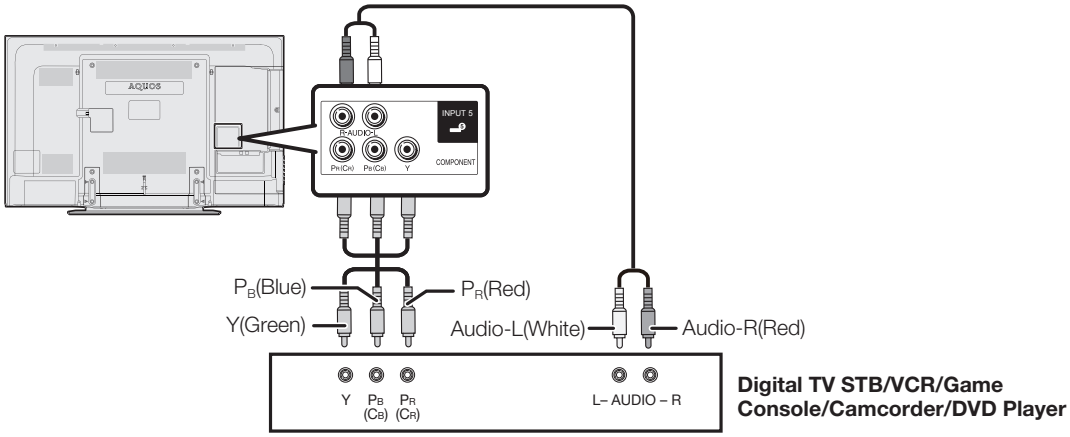
Connecting external devices

You can connect many types of external equipment to your TV, like a VCR, game console, camcorder, DVD player, Digital TV Set Top Box (STB) and PC. To view external source images, select the input source from **TV/VIDEO** on the remote control unit or **TV/VIDEO** on the TV.

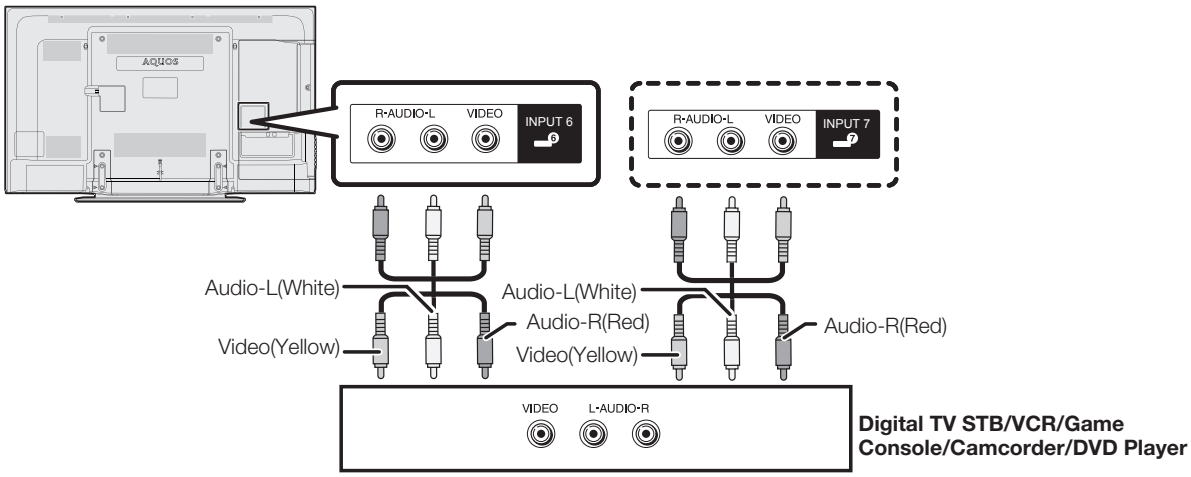
CAUTION

- To protect all equipment, always turn off the TV before connecting to a VCR, game console, camcorder, DVD player, Digital TV Set Top Box (STB), PC or other external equipment.
- Refer to the relevant operation manual (VCR, DVD player, etc.) carefully before making connections.

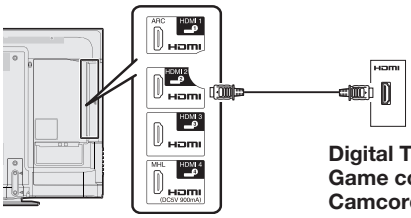
When using component cable (commercially available)



When using composite cable (commercially available)



When using HDMI cable (commercially available)

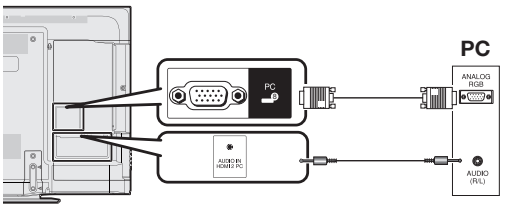


Digital TV STB/VCR/ Game console/ Camcorder/DVD Player

NOTE

- When using a DVI-HDMI adaptor, input the audio signal from the HDMI2/PC AUDIO INPUT terminal. (See page 71.)
- Some commercially available devices may have not been properly certified. When they are connected to the TV via HDMI1, there may be no sound at all. In this case, it is recommended to use HDMI2 and HDMI2/PC AUDIO INPUT terminal to input audio signals.

When using RGB cable (commercially available) connecting to a PC (see page 70)



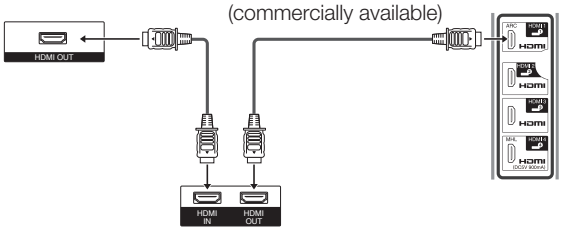
NOTE

- Macintosh adaptor may be required for use for some Macintosh computers.

Connecting an AV amplifier

Set Top Box (STB)

HDMI-certified cable (commercially available)



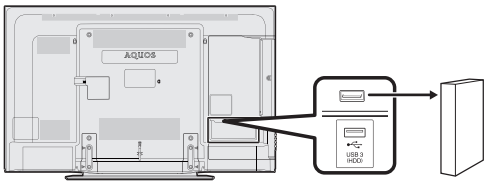
NOTE

- If the image is not in sync with the audio, check the settings of the connected surround system.
- Letting the TV output the audio to an AV amplifier:

- When you connect ARC-compatible equipment, use the HDMI1 terminal.
- If the equipment to be connected is not compatible with the ARC, connect an optical fibre cable.

Connecting a USB hard disk drive (HDD)

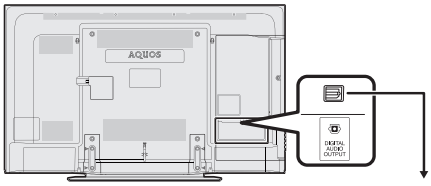
You can use USB3 (HDD) terminal when connecting a USB hard disk drive.



USB hard disk drive

Using digital audio output

It is possible to output audio through the DIGITAL AUDIO OUTPUT terminal. PCM or Bitstream (Dolby or DTS Digital audio) outputs from the terminal.



Optical fibre cable (commercially available)

To optical digital input of external audio devices

NOTE

- The DIGITAL AUDIO OUTPUT terminal usually outputs the same audio from the speakers. (The audio of the content you are viewing is output from the terminal.)
- The DIGITAL AUDIO OUTPUT terminal does not output some signals, depending on devices and software.

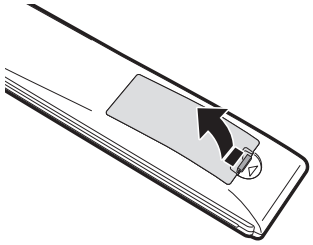
Connecting to the Network

See pages 76 to 77.

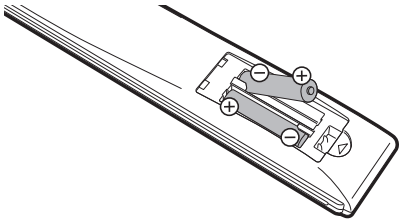
Inserting the batteries

Before using the TV for the first time, insert two “AAA” size alkaline batteries (supplied). When the batteries become depleted and the remote control fails to operate, replace the batteries with new “AAA” size alkaline batteries.

1 Open the battery cover.

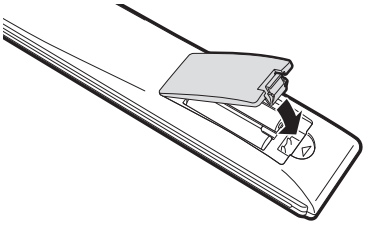


2 Insert the two supplied “AAA” size alkaline batteries.



- Place batteries with their terminals corresponding to the (+) and (−) indications in the battery compartment.

3 Close the battery cover.



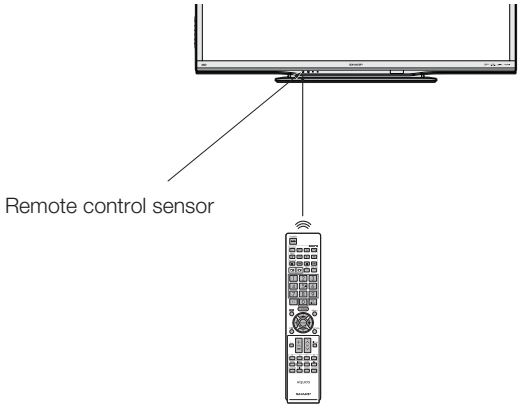
CAUTION

Improper use of batteries can result in chemical leakage or explosion. Be sure to follow the instructions below.

- Do not mix batteries of different types. Different types of batteries have different characteristics.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries or cause chemical leakage in old batteries.
- Remove batteries as soon as they have worn out. Chemicals that leak from batteries can cause a rash. If you find any chemical leakage, wipe thoroughly with a cloth.
- The batteries supplied with this product may have a shorter life expectancy due to storage conditions.
- If you will not be using the remote control unit for an extended period of time, remove the batteries from it.
- Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.

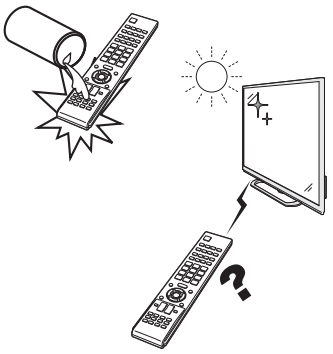
Using the remote control unit

Use the remote control unit by pointing it towards the remote sensor window.
Objects between the remote control unit and sensor window may prevent proper operation.

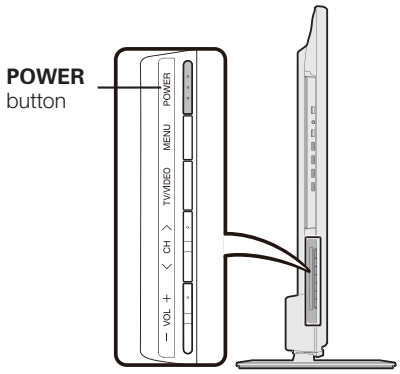


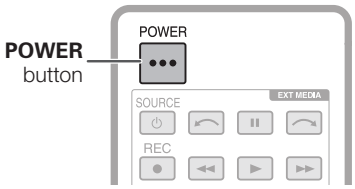
Cautions regarding the remote control unit

- Do not subject the remote control unit to shock.
  In addition, do not soak the remote control unit with liquids or place it in an area with high humidity.
- Do not install or place the remote control unit under direct sunlight.
  The heat may cause deformation of the unit.
- The remote control unit may not work properly if the remote sensor window of the TV is under direct sunlight or strong lighting. In such cases, change the angle of the lighting or TV, or operate the remote control unit closer to the remote sensor window.



Turning the TV on/off





Turning on/off the power

• To turn on the power

Press **POWER** on the TV. (After several seconds, an image appears with sound.)

NOTE

- Wait more than five seconds until you press **POWER** on the TV after inserting the power plug.

• To turn off the power

Switch it off by pressing **POWER** on the TV.

Standby mode

• To standby mode

If the TV is switched on, you can switch it to standby by pressing **POWER** on the remote control.

• Switching on from standby

From standby, press **POWER** on the remote control.

NOTE

- If you are not going to use this TV for a long period of time, be sure to remove the AC cord from the AC outlet.
- Minor power is consumed when the unit is in standby mode.

Initial auto installation

When the TV powers on for the first time after purchase, the initial auto installation wizard appears. Follow the menus and make the necessary settings one after another.

Confirm the following before turning on the power

- Is the antenna cable connected?
- Is the AC cord plugged in?

1 Press **POWER** on the TV.

- The initial auto installation wizard appears.

2 Press ▲/▼ to select the desired language, and then press **ENTER**.

3 Press ◀/▶ to select “HOME” or “STORE”, and then press **ENTER**.

- HOME: “STANDARD” will be the default value for the “AV mode” setting.
- STORE: “DYNAMIC (Fixed)” will be the default value for the “AV mode” setting. If the “AV mode” is changed, the TV will automatically switch back to “DYNAMIC (Fixed)” when there is no further change to TV setting for 10 minutes. When selecting “STORE”, press ◀/▶ to select “Yes”or “No” to confirm.

4 Press ◀/▶ to select “Digital Search” or “Analogue Search” and then press **ENTER**.

5 The TV searches for, sorts and stores all the receivable TV stations according to their settings and the connected antenna.

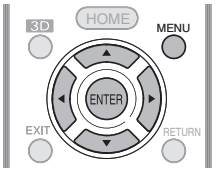
- To abort the initial auto installation in progress, press **RETURN**.

NOTE

- HOME mode: Settings are optimised for normal home viewing and energy efficiency.
- STORE mode: Settings are designed for maximum impact in retail store displays.
- To change the “STORE” mode to “HOME” mode, please refer to page 97 to reset the unit.
- If you turn off the power on the TV after performing step 4, the initial auto installation wizard does not appear. The auto installation function allows you to execute the auto installation again from the “Setup” menu. (See page 26.)
- The initial auto installation wizard will go off if you leave the TV unattended for 10 minutes before searching for channels in step 5.

Supplying electric power to the antenna

When you set-up the D-TV antenna for the first time, or connect the antenna to a community antenna, you need to proceed to set the antenna by following this manual.



1. Press **D–TV** to access D-TV mode.
2. Press **MENU** and the MENU screen displays.
3. Press ▼/◀/▶ to select “View setting”.
4. Press ▲/▼ to select “Channel settings” and then press **ENTER**.
5. Press ▲/▼ to select “Antenna setup-DIGITAL” and then press **ENTER**.
6. Press ▲/▼ to select “Supply voltage” and then press **ENTER**.
7. Press ◀/▶ to select “On” and then press **ENTER**.

Selected item	Description
On	Select “On” when your antenna is set-up and connected independently. Typical supply voltage: 5V Typical supply current: 50mA
Off	Select “Off” when you do not need to supply voltage to your antenna, i.e. when your antenna is connected to a community antenna. (The factory default setting of this function is “Off”.)

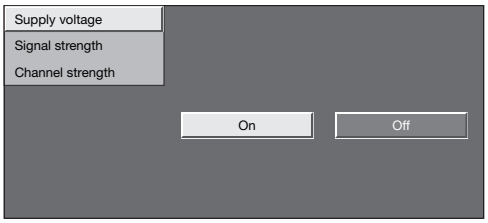
Checking signal strength and channel strength

If you install a D-TV antenna for the first time or relocate it, you should adjust the alignment of the antenna to receive a good reception while checking the antenna setup screen.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “View setting”.
3. Press ▲/▼ to select “Channel settings” and then press **ENTER**.
4. Press ▲/▼ to select “Antenna setup-DIGITAL”, and then press **ENTER**.

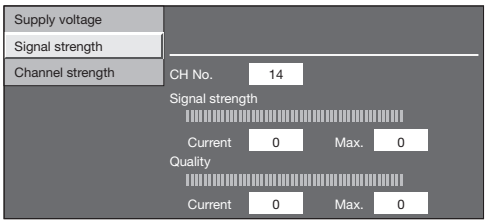
■ Power supply setting to antenna terminal

Press ◀/▶ to select “On” or “Off”.



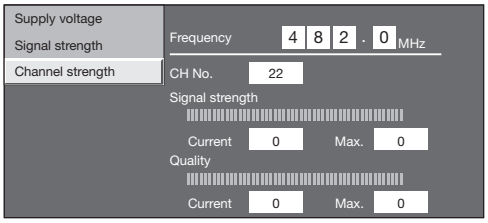
■ Checking signal strength

Press ▲/▼ to select “Signal strength”.



■ Checking channel strength

Press ▲/▼ to select “Channel strength”, and then press **ENTER**.



5. Position and align the antenna so that the maximum possible values for “Signal strength” and “Quality” are obtained.

NOTE

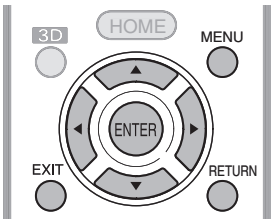
- The values of “Signal strength” and “Quality” indicate when to check the appropriate alignment of the antenna.

About Menu operations

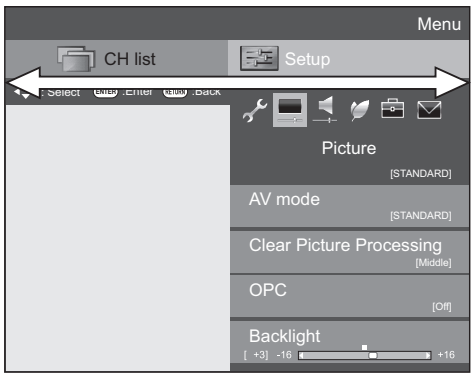
What is Menu?

- You need to bring up the On-Screen Display to perform settings for the TV. The On-Screen Display for the settings is called “Menu”.
- The Menu can be operated with the remote control unit.

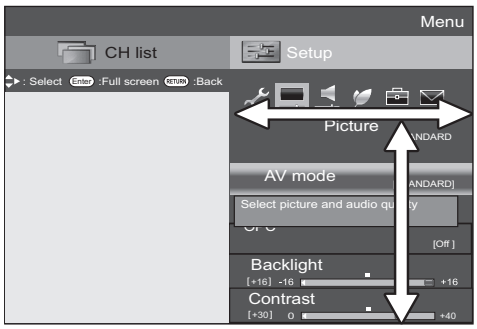
Basic menu operations



1 Press **MENU** and the MENU screen displays.



2 Press ▲/▼/◀/▶ to select the desired menu item.
Press **ENTER** to proceed if necessary.

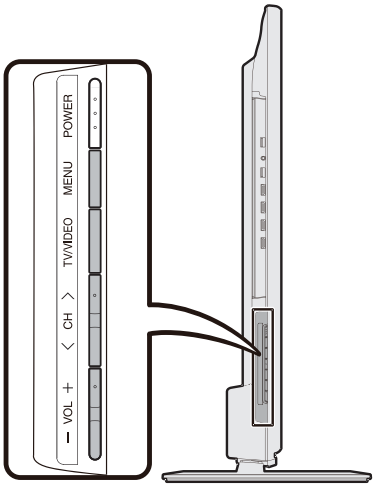


3 Press ▲/▼ or ◀/▶ to select the desired item or adjust the item to the desired level. Press **ENTER** if necessary.

4 Press **EXIT** or **MENU** to exit the MENU.
Press **RETURN** as necessary to return to the previous MENU.

■ Using the control panel of the TV

You can also operate the Menu using the control panel of the TV.
Button operations on the control panel correspond to the ones on the remote control as shown below.



TV control panel buttons	Remote control buttons
MENU	MENU
TV/VIDEO	ENTER
CH ∧	▲
CH ∨	▼
VOL +	▶
VOL –	◀

NOTE

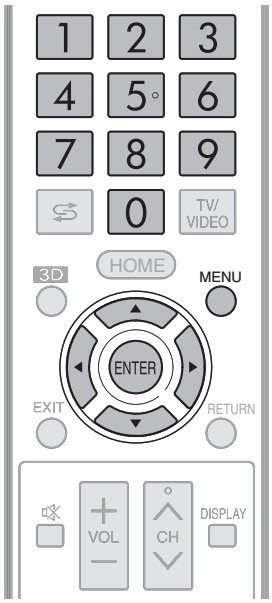
- Menu options differ in the selected input modes, but the operating procedures are the same.
- The screens in the operation manual are for explanation purposes (some are enlarged, others cropped) and may vary slightly from the actual screens.

About guide display

The operations differ depending on the functions and menu items. Refer to the guide display for the key buttons.

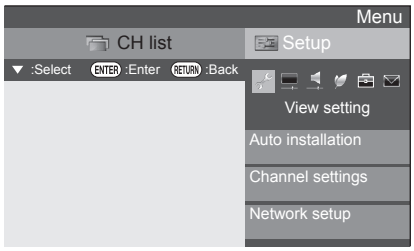
Setting channels automatically

You can run auto installation again, even after setting up the preset channels.

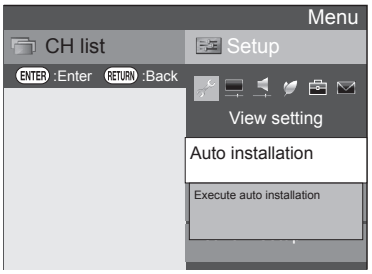


1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “View setting”.



3 Press ▲/▼ to select “Auto installation”, and then press **ENTER**.



4 If you have already set the password, enter it here.

- See page 35 for setting a password.

– – – –

5 Press ◀/▶ to select “Yes”, and then press **ENTER**.

6 Press ▲/▼ to select the desired language listed on the screen, and then press **ENTER**.

Press ◀/▶ to select “Digital Search” or “Analogue Search”, and then press **ENTER**.

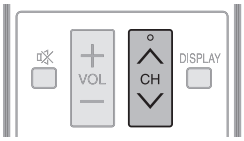
You do not need to do anything during the auto search.

Selecting programmes

You can change channels in several ways.

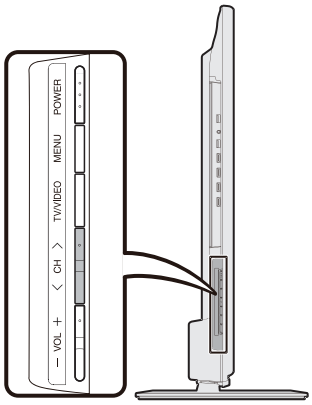
Using CH ∧/∨ on the remote control unit

- Press **CH** ∧ to increase the channel number.
- Press **CH** ∨ to decrease the channel number.



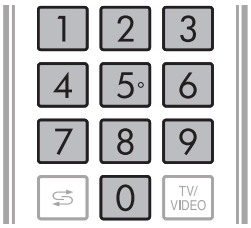
NOTE

- **CH** ∧/∨ on the TV operates the same as **CH** ∧/∨ on the remote control unit.



Using 0 - 9 on the remote control unit

Select the channels directly by pressing buttons **0** to **9**.



EXAMPLE

To select a 1-digit channel (e.g. channel 2):

- Press **0**, followed by **2**.

To select a 2-digit channel (e.g. channel 12):

- Press **1**, followed by **2**.

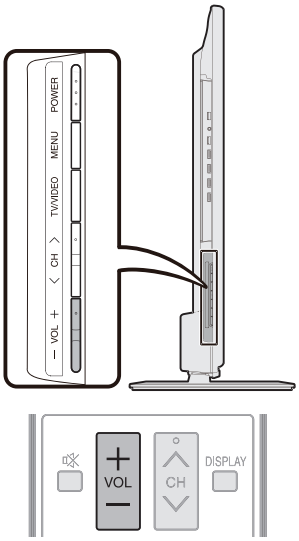
To select a 3-digit channel (e.g. channel 123):

- Press **1**, followed by **2** and **3**.

Channel display

(Example)

Adjusting the volume



Changing the volume

You can change the volume on the TV or on the remote control unit.

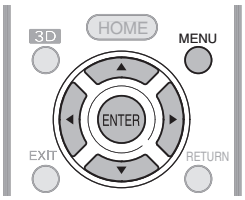
- To increase the volume, press **VOL** +.
- To decrease the volume, press **VOL** −.

NOTE

- "TV (A-TV, D-TV)", "HDMI1 (ARC)", "HDMI2", "HDMI3", "HDMI4", "INPUT5", "INPUT6","INPUT7", "PC", "USB media" and "Home network" modes can store volume adjustment values separately.

Setting channels to your preference

You can run the auto search procedure again at any time by accessing the “Setup” menu and “Programme setup”. Channels can be tuned automatically or manually.



Digital settings

You can reconfigure D-TV services settings automatically or manually.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “View setting”.

3 Press ▲/▼ to select “Channel settings” and then press **ENTER**.

4 Press ▲/▼ to select “Programme setup”, and then press **ENTER**. If you have already set the password, enter it here.
- See page 35 for setting a password.

The “Digital setting” screen displays and then press **ENTER**.

5 Press ▲/▼ to select the desired menu item, and then press **ENTER**.

6 Press ◀/▶ to select “Yes”, and then press **ENTER**.

NOTE

- “Digital setting” is available only in the D-TV mode.

■ Additional search

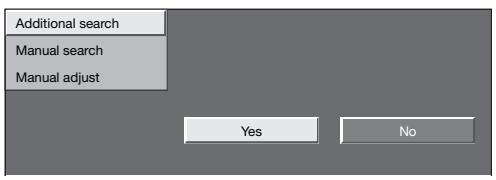
Use this menu to add new services automatically after auto installation has been completed.

■ Manual search

Add new services within a specified frequency band.
- Enter the frequency using **0 – 9** numeric buttons.

■ Manual adjust

Configure various settings for each service using the Colour (**R**, **G**, **Y**) buttons.



1 Press ▲/▼ to select the desired service.

2 Press the colour button on the remote control corresponding with the item you want to reconfigure.
- The ✔ mark indicates the operation is set to on. Each time the colour button is pressed, you can switch the corresponding operation on/off.

Buttons for Manual Adjust operation

Menu items	Remote control buttons	Description
Lock	**R**	When the service is locked, you must enter your password whenever you tune to the service.
CH skip	**G**	Services with a ✓ mark are passed over when pressing ∧/∨ in the TV/ remote control unit.
Delete	**Y**	The service is deleted from the list. Execute one of “Auto installation”, “Additional search” or “Manual search” to watch the deleted service again.

Manual setting for each channel (Analogue)

You can set some channel items manually. They are Search, Fine (TV frequency), Colour sys., Sound sys., Label, Skip and Lock (Child Lock).

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “View setting”.

3 Press ▲/▼ to select “Channel settings” and then press **ENTER**.

4 The “Programme setup” screen displays, and then press **ENTER**. If you have already set the password, enter it here.
- See page 35 for setting a password.

The “Analogue setting” screen displays, and then press **ENTER**.

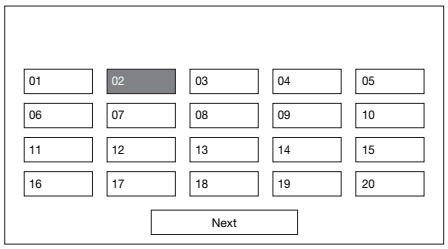
5 Press ▲/▼ to select “Manual Adjust”, and then press **ENTER**.

6 Press ◀/▶ to select “Yes”, and then press **ENTER**.

NOTE

- “Analogue setting” is available only in the A-TV mode.

Programme Setup “Manual Adjust” menu

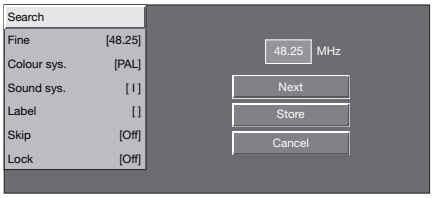


You can select one of the following settings.
Search (See this page.)
Fine (See this page.)
Colour sys. (See this page.)
Sound sys. (See page 30.)
Label (See page 30.)
Skip (See page 30.)
Lock (See page 30.)

Search tuning

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **ENTER**.
- The selected channel information displays.

2 Press ▲/▼ to select “Search”, and then press **ENTER**.



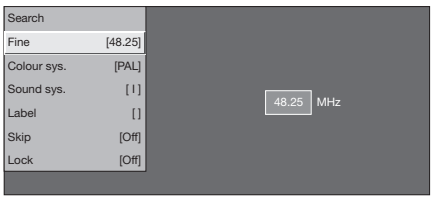
3 Press ▲/▼ to select item and press **ENTER**.
- **Next**: Search the next channel.
- **Store**: Memorise the current display channel.
- **Cancel**: Return to the previous screen. (The search result will not be stored.)

Fine tuning

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **ENTER**.
- The selected channel information displays.

2 Press ▲/▼ to select “Fine”, and then press **ENTER**.

3 Use **0 – 9** to directly enter the frequency number of the channel, and then press **RETURN** or **MENU**.
- Adjust while checking the background picture as a reference.



- When setting a frequency on the “Fine” screen, the last figure of the frequency needs to be “0” or “5”.

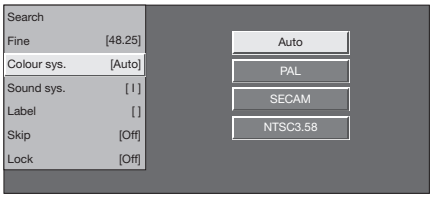
EXAMPLE
- 179.25 MHz: Press **1** → **7** → **9** → **2** → **5** → **ENTER**.
- 49.25 MHz: Press **4** → **9** → **2** → **5** → **ENTER**.

Colour system

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **ENTER**.
- The selected channel information displays.

2 Press ▲/▼ to select “Colour sys.” and then press **ENTER**.
- Receivable colour systems are listed.

Colour system menu



3 Press ▲/▼ to select the optimum colour system, and then press **ENTER**.

Manual setting for each channel (Analogue) (continued)

Sound system (Broadcasting system)

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **ENTER**.
- The selected channel information displays.

2 Press ▲/▼ to select “Sound sys.”, and then press **ENTER**.
- Receivable sound systems (Broadcasting systems) are listed.

3 Press ▲/▼ to select the optimum sound system, and then press **ENTER**.

NOTE
- Check the sound system if the sound output were not correct.

Labelling channels

You can change individual channel names.

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **ENTER**.
- The selected channel information displays.

2 Press ▲/▼ to select “Label”, press **ENTER**, and then press **ENTER** again.
- The software keyboard will be displayed.

3 Use the software keyboard to input the new name.
- Refer to **“Using Software keyboard”** at the bottom of this page.

NOTE
- The name can be 5 characters or less. Select “Done” to set the channel name.

Skipping channels

Channels with “Skip” set to “On” are passed over when using **CH** ∧/∨ even if selected while watching the image from the TV.

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **ENTER**.
- The selected channel information will be displayed.

2 Press ▲/▼ to select “Skip”, and then press **ENTER**.
- Skip menu displays.

3 Press ▲/▼ to set “Skip” to “On”, and then press **ENTER**.

Setting the child lock

You can block the viewing of any channel.

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **ENTER**.
- The selected channel information will be displayed.

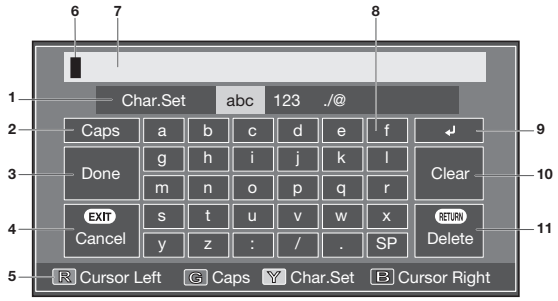
2 Press ▲/▼ to select “Lock”, and then press **ENTER**.
- Child lock menu will be displayed.

3 Press ▲/▼ to set “Lock” to “On”, and then press **ENTER**.

NOTE
- See page 35 for setting a password.
- If “Lock” is set to “On” for a channel, “Child lock has been activated” is displayed when you select the channel, and the image and sound of the channel is blocked.
- When pressing **RETURN** while “Child lock has been activated” is displayed, password input menu will be displayed. Inputting the correct password lifts the child lock temporarily until the power is turned off.

Using Software keyboard

The software keyboard appears when you need to input text.



1 Char. Set
Changes character set into the alphabet, numbers, symbols, etc.

2 Caps
Changes characters to capital/lower case.

3 Done
Confirm the entry.

4 Cancel
Abort input and close the software keyboard.

5 R/G/Y/B (Colour) buttons
Selects the coloured items on the screen.

6 Input cursor
Press ◀/▶ to move the cursor when highlighted.

7 Input field
The text you enter is displayed as you type it in.

8 Character
Input characters by using these buttons.

9 ↵
Put a line break.

10 Clear
Erases the character string.
- When the cursor is somewhere in a line: the character string to the right of the cursor will be erased.
- When the cursor is at the right end of a line: the entire line will be erased.

11 Delete
If the cursor is at the right end of a line, this erases text one character at a time.
- You can also delete text by pressing **RETURN** on the remote control unit.

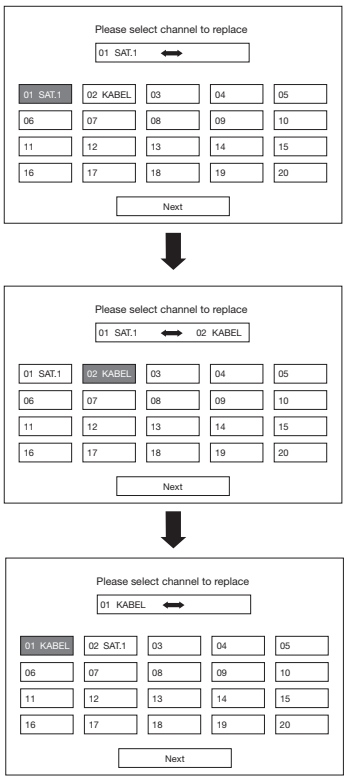
Sorting programmes (Analogue)

Channel positions can be sorted freely.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “View setting”.
3. Press ▲/▼ to select “Channel settings” and then press **ENTER**.
4. The “Programme setup” screen displays, and then press **ENTER**. If you have already set the password, enter it here.
   - See page 35 for setting a password.

   The “Analogue setting” screen displays, and then press **ENTER**.
5. Press ▲/▼ to select “Sort”, and then press **ENTER**.
6. Press ◀/▶ to select “Yes”, and then press **ENTER**.
7. Press ▲/▼/◀/▶ to select the channel you want to move, and then press **ENTER**.
8. Press ▲/▼/◀/▶ to move it to the desired position, and then press **ENTER**.
9. Repeat the steps 7 and 8 until all desired channels are sorted.

Sort menus


Please select channel to replace
01 SAT.1
01 SAT.1 02 KABEL 03 04 05
06 07 08 09 10
11 12 13 14 15
16 17 18 19 20
Next
Please select channel to replace
01 SAT.1 02 KABEL
01 SAT.1 02 KABEL 03 04 05
06 07 08 09 10
11 12 13 14 15
16 17 18 19 20
Next
Please select channel to replace
01 KABEL
01 KABEL 02 SAT.1 03 04 05
06 07 08 09 10
11 12 13 14 15
16 17 18 19 20
Next

Erasing programmes (Analogue)

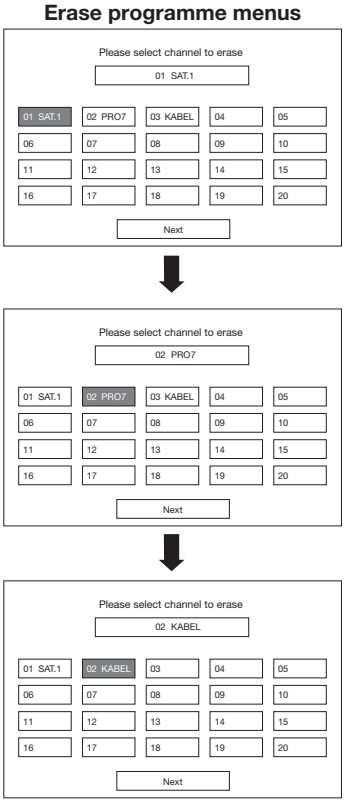
The individual programme can be erased.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “View setting”.
3. Press ▲/▼ to select “Channel settings” and then press **ENTER**.
4. The “Programme setup” screen displays, and then press **ENTER**. If you have already set the password, enter it here.
   - See page 35 for setting a password.

   The “Analogue setting” screen displays, and then press **ENTER**.
5. Press ▲/▼ to select “Erase programme”, and then press **ENTER**.
6. Press ◀/▶ to select “Yes”, and then press **ENTER**.
7. Press ▲/▼/◀/▶ to select the channel you want to erase, and then press **ENTER**.
   - A message screen pops up.
8. Press ◀/▶ to select “Yes”, and then press **ENTER**.

   All the subsequent programmes move up.
9. Repeat the steps 7 and 8 until all desired channels are erased.

Erase programme menus



Useful viewing functions

Freezing the image

Allows you to capture and freeze one frame from a moving image that you are watching.

1 Press **FREEZE**.
- Captures one frame from a moving image.

2 Press **FREEZE** again to cancel the function.

NOTE
- The still image automatically goes out after 30 minutes.
- You also can press **RETURN** to cancel the function.
- This function may be disable depending on the input sources.

Returning to the previously selected channel

Press ⇄ to switch the currently tuned channel to the previously tuned channel.
Press ⇄ again to switch back to the currently tuned channel.
Press ⇄ to toggle between the currently selected input source and the previously selected one.

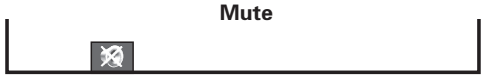
Muting the audio temporarily

Using (Mute) on the remote control unit

(Mute) mutes the current sound output.

1 Press **(Mute)**.
- The sound is silenced.
- "" is displayed while the mute function is on.

Mute



2 Press **(Mute)** again within 30 minutes to cancel the mute.
- Before 30 minutes, the volume level returns to the previous setting.

NOTE
- **Mute will be cancelled after 30 minutes. However, the TV will not suddenly output loud sound as the volume level will be set to 0 automatically. Increase the volume level by pressing VOL+.**

Outputting only audio

When listening to music from a music programme, you can set the display off and enjoy audio only.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select "ECO".

3 Press ▲/▼ to select "Audio only", and then press **ENTER**.

4 Press ▲/▼ to select "On", and then press **ENTER**.

Selected item	Description
On	Audio is output without screen image.
Off	Both picture and audio are output.

NOTE
- When you make operations that change the picture on the TV such as by changing the input source, the "Audio only" function is set to "Off".

Quick start

You can reduce the TV's start-up time after turning on the power with the remote control unit.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select "Option".

3 Press ▲/▼ to select "Quick start", and then press **ENTER**.

4 Press ▲/▼ to select desired items, and then press **ENTER**.

Selected item	Description
On	The TV quickly starts up from standby.
On (Wallpaper)	The TV enters wallpaper mode when in standby condition.
Off	Power consumption is small during standby.

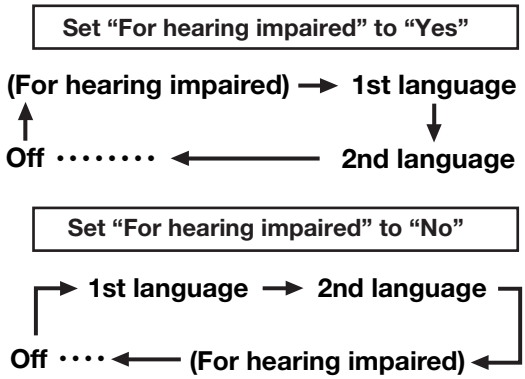
Menu language settings

You can also select a language from setup menu. Select from among 3 languages: English, Simplified Chinese and Traditional Chinese.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “View setting”.
3. Press ▲/▼ to select “Language”, and then press **ENTER**.
4. Press ▲/▼ to select the desired language listed on the screen, and then press **ENTER**.

Switching subtitle languages

Each time you press **(Subtitle)** on the remote control, the subtitle switches when the broadcast contains subtitle information.



Selecting the Language

Set up two preferred subtitle languages to display if the subtitle languages are available.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “View setting”.
3. Press ▲/▼ to select “Individual setting” and then press **ENTER**.
4. Press ▲/▼ to select “Subtitle”, and then press **ENTER**.
5. Press ▲/▼ to select “1st language” or “2nd language”, and then press **ENTER**.
6. Press ▲/▼ to select the desired language, and then press **ENTER**.

NOTE

- If subtitles for the selected language are not included in a received broadcast, subtitles will not be shown for that language.
- Subtitles may not be displayed properly in 3D mode.

Displaying subtitles for the hearing impaired

If the broadcast includes subtitles for the hearing impaired, they will take precedence over other subtitles.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “View setting”.
3. Press ▲/▼ to select “Individual setting” and then press **ENTER**.
4. Press ▲/▼ to select “Subtitle”, and then press **ENTER**.
5. Press ▲/▼ to select “For hearing impaired”.
6. Press ◀/▶ to select “Yes”.

NOTE

- If the broadcast includes no subtitles for the hearing impaired, they will not be displayed even when set to “Yes”.
- Subtitles may not be displayed properly in 3D mode.

Digital audio language

Set up to three preferred multi audio languages to display if the audio languages are available.

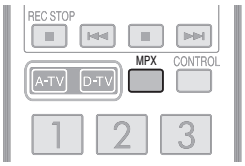
1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “View setting”.
3. Press ▲/▼ to select “Individual setting”, and then press **ENTER**.
4. Press ▲/▼ to select “Digital audio language”, and then press **ENTER**.
5. Press ▲/▼ to select “1st language”, “2nd language” or “3rd language”, and then press **ENTER**.
6. Press ▲/▼ to select the desired language, and then press **ENTER**.

NOTE

- This function depends on audio language information from broadcasters.
- If audio for the selected language is not included in a received broadcast, audio will not be output for that language.

Switching the analogue audio format

You can switch between multiple audio modes when watching a multiple audio or stereo broadcast programme.



In the NICAM TV broadcasts

When receiving a stereo signal

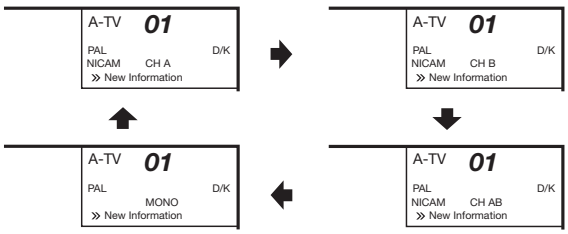
Each time you press **MPX**, the mode switches between NICAM STEREO and MONO.

Stereo mode

When receiving a bilingual signal

Each time you press **MPX**, the mode switches among NICAM CH A, NICAM CH B, NICAM CH AB and MONO.

Bilingual mode



When receiving a monaural signal

Each time you press **MPX**, the mode switches between NICAM MONO and MONO.

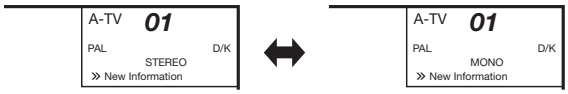
Monaural mode

In the TV mode of A2 TV broadcasts

When receiving a stereo signal

Each time you press **MPX**, the mode switches between STEREO and MONO.

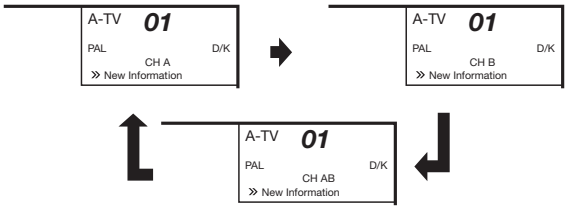
Stereo mode



When receiving a bilingual signal

Each time you press **MPX**, the mode switches among CH A, CH B and CH AB.

Bilingual mode



When receiving a monaural signal

When you press **MPX**, "MONO" displays.

Monaural mode

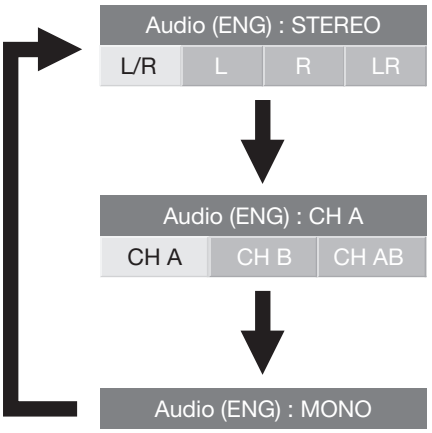
NOTE

- "BBC2", "99" and "PAL" are tentative network name, channel and colour system.

Switching the digital audio format

If multi sound modes are received, each time you press **MPX** the mode switches as follows.

(Example)



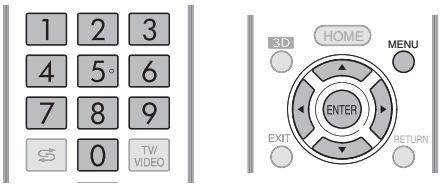
■ Press ◀/▶ to select L or R sound when the STEREO or DUAL MONO screen is displayed.

NOTE

- The sound mode screen disappears in 6 seconds.
- Selectable items vary depending on the received broadcasts.

Password setting for the child lock

Allows you to use a password to protect certain settings from being accidentally changed.



Setting a password

Register a 4-digit password number to use the Child Lock function.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “View setting”.

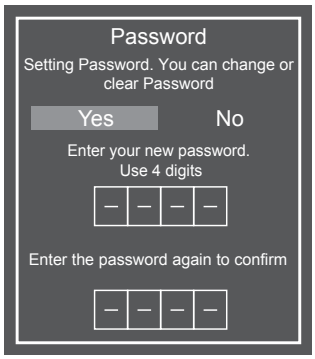
3 Press ▲/▼ to select “Individual setting” and then press **ENTER**.

4 Press ▲/▼ to select “Password”, and then press **ENTER**.

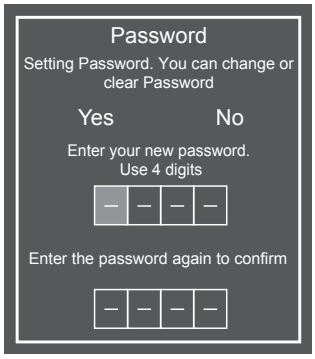
5 If you already set the password, enter it here.

– – – –

6 Press ◀/▶ to select “Yes”, and then press **ENTER**.


Password
Setting Password. You can change or clear Password
Yes
No
Enter your new password. Use 4 digits
– – – –
Enter the password again to confirm
– – – –

7 Enter the 4-digit number as a password using **0 - 9**.


Password
Setting Password. You can change or clear Password
Yes
No
Enter your new password. Use 4 digits
– – – –
Enter the password again to confirm
– – – –

8 Enter the 4-digit number as in step 7 to confirm.

9 Press **ENTER** to complete.

NOTE

- To view a locked channel (Lock setting in Programme setup “Manual adjust” is set to “On”), you must enter a password. (See this page.) When you select a locked channel, a password prompt message pops up. Press **RETURN** to display the password input window.

Deleting the password

Allows you to clear your password.

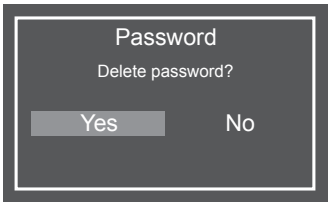
1 Repeat steps 1 to 4 in **Setting a password**.

2 Enter the password.

– – – –

3 Press ◀/▶ to select “No”, and then press **ENTER**.

4 Press ◀/▶ to select “Yes”, and then press **ENTER** to delete the password.



NOTE

- **As a precautionary measure, make a note of your password on page 102, cut it out and keep it in a safe place that children cannot reach.**
- This function is only available for TV input mode.
- To relock a channel which has been temporarily unlocked by inputting the correct password, turn power off and then on again.

Parental rate

This function allows TV channels to be restricted. It prevents children from watching violent or sexual scenes that may be considered inappropriate.

1. Repeat steps 1 to 3 in **Setting a password**.
2. Press ▲/▼ to select “Parental rating”, and then press **ENTER**.
3. Press ▲/▼ to select your desired rating, and then press **ENTER**.

Selected item	Description
None	Cancel the blocking.
Age 4-18 years	Select desired age to block. (Example) If age 14 is selected, programmes rated for ages of 15 or more are blocked.

Programme title display

This function allows you to display programme information on the screen including the title and airtime by tuning a channel.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “Option”.
3. Press ▲/▼ to select “Screen effect” and then press **ENTER**.
4. Press ▲/▼ to select “Programme title display”.
5. Press ◀/▶ to select “Yes”.

NOTE

- The Programme title display function is only available for the D-TV mode.

Key lock

This function allows you to lock the buttons on the TV or remote control in order to prohibit children from changing the channel or volume.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “Option”.
3. Press ▲/▼ to select “Key lock”, and then press **ENTER**.
4. Press ▲/▼ to select “RC control lock” or “Button control lock”, and then press **ENTER**.
5. Press ◀/▶ to select “Yes”, and then press **ENTER**.

Selected item	Description
Off	Unlock the buttons.
RC control lock	The operation with remote control is blocked.
Button control lock	The operation with main unit buttons is blocked (Expect POWER button).

NOTE

- You cannot set both “RC control lock” and “Button control lock” at the same time.

■ Cancelling the lock

To cancel “RC control lock” follow the below steps using the TV control panel buttons on the TV.

1. Press **MENU** on the TV and **VOL +/–** to select “Setup”.
2. Press **CH⋁** and **VOL+/–** to select “Option”.
3. Press **CH⋀/⋁** to select “Key lock” and then press **TV/VIDEO**.
4. Press **CH⋀/⋁** to select “Off” and then press **TV/VIDEO**.

NOTE

- See page 25 for the functions of the TV control panel buttons.
- **To cancel “Button control lock”, use the remote control.**

Favourite channel information

This function allows you to group your favourite channels in a separate list. Pre-setting “My favourite” in advance allows you to select your favourite channels more conveniently.

NOTE

- “My favourite” can only be used for D-TV mode.

■ How to add / remove / move your favourite channels

Press **ENTER** to display the on-screen channel list.

- If you have already set your favourite channels, you will be able to see “CH list” or “My favourite” depending on your previous selection.

Function buttons used to edit “My favourite”

Buttons	Description
R button	Add to “My favourite” list or remove from “My favourite” list. The “ ♥ ” mark will be added to or removed from the selected channel.
B button	Move channel position in “My favourite” list. (“My favourite” channel numbers will be sequentially allocated.)

NOTE

- If you delete a channel via the “Manual adjust” option (“HOME” > “TV Menu” > “Setup” > “View setting”>“Channel settings” > “Programme setup” > “Digital setting” > “Manual adjust”), this will be deleted from both the “CH list” and “My favourite” list.

Selecting channels from “My favourite” list

1 How to move between “My favourite” list and “CH list”.
① Press **ENTER** when you watching D-TV to bring up the “CH list”.
② Press ▶ and select ♥ “My favourite” list.

2 Move up and down the displayed channel list using ▲/▼then press **ENTER** to select the desired channel.

NOTE

- When watching your favourite channels via “My favourite” list, you can directly select other favourite channel by entering the favourite channel number on the remote control.
- Selecting the EPG function while using “My favourite” channel list, will only show details for the favourite channels you have added. To view details of all available channels via the EPG, please switch back to “CH list” mode from “My favourite” by pressing ◀ and reselect “CH list”.

Energy conservation settings

Auto power-off at a designated time

This function is conveniently used when, for instance, going to bed while watching TV.

1 Press **SLEEP**.

- Remaining time displays when sleep timer has been set.

Sleep timer: Remain 2 hr. 00 min.

2 Each time you press **SLEEP**, the remaining time switches as shown below.

0 hr. 30 min. → 1 hr. 00 min. → 1 hr. 30 min. → 2 hr. 00 min. → 2 hr. 30 min. → Off

NOTE

- When the time has been set, countdown automatically starts.
- Five minutes before the preset of time expires, the remaining time displays each minute.
- Select “Off” by pressing **SLEEP** to cancel the sleep timer.

Using Sleep timer on the menu screen

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “ECO”.

3 Press ▲/▼ to select “Sleep timer”, and then press **ENTER**.

4 Press ▲/▼ to select “Change”, and then press **ENTER**.

5 Press ▲/▼ to select the desired item, and then press **ENTER**.

NOTE

- When the time has been set, countdown automatically starts.
- Five minutes before the preset of time expires, the remaining time displays each minute.

ECO picture control

This function automatically detects the image source and decreases the power consumption while keeping the brightness of the image unchanged.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “ECO”.

- ECO menu displays.

3 Press ▲/▼ to select “ECO picture control”.

4 Press ◀/▶ to select “On” or “Off”.

NOTE

- This function does not work when “AV mode” is set to “DYNAMIC (Fixed)”, “DYNAMIC” or “Auto”.
- This function is greyed out in 3D mode.
- This function does not work when “Energy Save” is set to “Standard” or “Advanced”.

Energy save

This function enables you to automatically reduce the backlight brightness in order to decrease the power consumption and increase the backlight life span.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “ECO”.
- ECO menu displays.

3 Press ▲/▼ to select “Energy save”, and then press **ENTER**.

4 Press ▲/▼ to select “Standard” or “Advanced”, and then press **ENTER**.

Selected item	Description
Standard	Reduces the backlight brightness.
Advanced	Reduces the backlight brightness more than “Standard”.
Off	The backlight brightness is the same value of your settings in the selected “AV mode ”.

Auto power-off after the end of broadcast

You can set the TV to automatically power off in about 15 minutes after the TV goes into a state of receiving no programme signals, such as the end of a broadcast day.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “ECO”.

3 Press ▲/▼ to select “No signal off”.

4 Press ◀/▶ to select “Enable”.
- Five minutes before the power shuts down, the remaining time displays every minute.

NOTE
- “Disable” is the factory preset value.
- When a TV programme finishes, and the TV receives signal input, this function may not operate.

Auto power-off when there are no operations performed

You can set the TV to automatically power off when no TV operation is performed for 30 minutes or more than 3 hours.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “ECO”.

3 Press ▲/▼ to select “No operation off”, and then press **ENTER**.

4 Press ▲/▼ to select “30 min.”, “3 hr.” or “Disable”.
- Five minutes before the power shuts down, the remaining time displays every minute.

NOTE
- “Disable” is the factory preset value.

Picture size settings

Auto wide

The "Auto wide" allows a television to switch automatically among the different screen formats.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “Option”.

3 Press ▲/▼ to select “Auto wide”.

4 Press ◀/▶ to select “On” or “Off”.

NOTE
- “Auto wide” is only available in D-TV mode.
- The channel switching speed may be slower when "Auto wide" is turned on.
- Try to set WIDE mode if an image does not switch to the correct screen format. When the broadcast signal contains no aspect ratio information, the function will not work even if enabled.
- This function is available for 3D images converted from 2D images or normal 2D images.
- In case of weak or unstable signals, it is recommended to turn Auto wide “Off” to avoid signal misjudgment.

4:3 Mode

The 4:3 mode allows you to select between Full and Normal.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “Option”.

3 Press ▲/▼ to select “4:3 Mode”, and then press **ENTER**.

4 Press ▲/▼ to select “Full” or “Normal”, and then press **ENTER**.

WSS signal 4:3 screen

4:3 mode “Full”

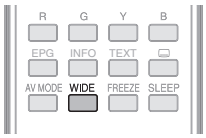
4:3 mode “Normal”

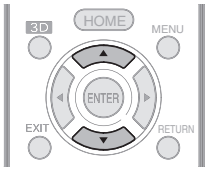
Selected item	Description
Full	Wide image without side bars
Normal	Normal range keeping 4:3 or 16:9 aspect ratio

Selecting the picture size manually

Manual Selection

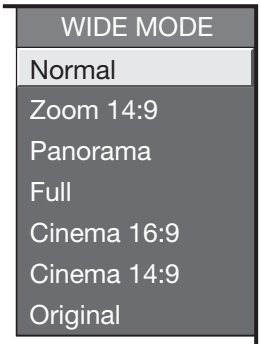
You can select different picture sizes that account for the kind of each picture.





1 Press **WIDE**.

- The “Wide mode” menu displays.
- The menu lists the wide mode options selectable for the type of TV/video signal currently received.



2 Press **WIDE** or ▲/▼ while the “Wide mode” menu displays on the screen.

- As you toggle down the options, each mode is immediately reflected on the TV.

Auto Selection

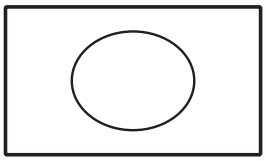
If you set “Auto wide” and “4:3 Mode” in the Setup menu on page 38, the optimum WIDE mode is automatically chosen for every broadcast containing the aspect ratio information.

“Auto wide” menu

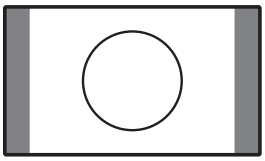
To enable Auto Selection, set “Auto wide” in the Setup menu to “On”. (See page 38.)

“4:3 Mode” menu

To set the type of the wide screen, select “Full” or “Normal” in the 4:3 Mode menu. (See page 38.)



4:3 Mode set to “Full”

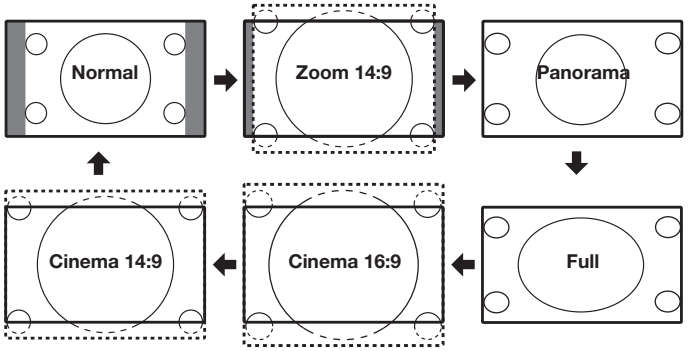


4:3 Mode set to “Normal”

NOTE

- “Auto wide” and “4:3 Mode” are only available in D-TV mode.
- If the broadcast signal contains no aspect ratio information, Auto Selection will not function even when the "Auto wide" option is enabled.
- You can also use wide mode from the menu screen.
- You may not be able to change the wide mode while in 3D mode.

Selected item	Description
Normal	For 4:3 “standard” pictures. A side bar appears on each side.
Zoom 14:9	For 14:9 letterbox pictures. A thin side bar appears on each side, and you may also see bars on the top and bottom with some programmes.
Panorama	In this mode the picture is progressively stretched toward each side of the screen.
Full	For 16:9 squeeze pictures.
Cinema 16:9	For 16:9 letterbox pictures. Bars may appear on the top and bottom with some programmes.
Cinema 14:9	For 14:9 letterbox pictures. Bars may appear on the top and bottom with some programmes.
Dot by Dot	Display an image with the same number of pixels on the screen (only when receiving 1080i / 1080p signal).
Underscan	Display with an Underscan image only when receiving a 720p signal. Display with the High-Definition image adjusted optimally. Noise may appear on the edge of the screen with some programmes.
Auto	Keeps the original aspect ratio and enlarges the picture as much as possible.
Original	Keeps the original aspect ratio and size.



NOTE

- Some picture sizes may not be displayable depending on the input signal.
- “Auto”, “Original” and “Full” can be selected only during video playback in “Video mode” of USB media/Home network on page 93.
- “Zoom 14:9” and “Cinema 14:9” only available for the D-TV or A-TV mode.

Selecting a preset AV mode

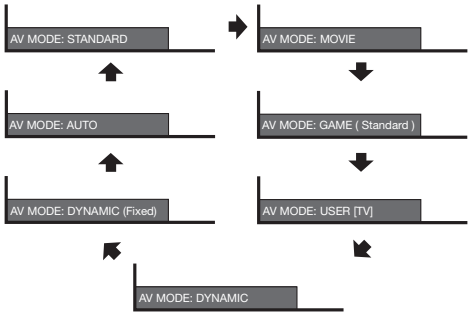
The “AV mode” function enables you to select appropriate settings for audio and video to account for the system environment which can vary due to factors like room brightness, type of programme watched or the type of image input from external equipment.

Using AV MODE on the remote control unit

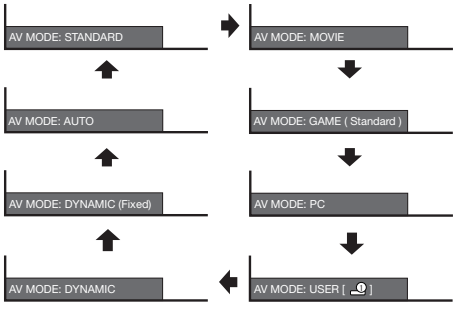
1 Press **AV mode**.
- Present “AV mode” displays.

2 Press **AV mode** again before the mode displayed on the screen disappears.
- The mode changes as shown below.

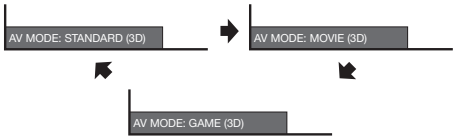
TV input mode (2D)



External input mode (2D)



TV or external input mode (3D)



Using “AV mode” on the menu screen

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “Picture”.

3 Press ▲/▼ to select “AV mode”, and then press **ENTER**.

4 Press ▲/▼ to select the desired item, and then press **ENTER**.

Selected item	Description
AUTO	The TV automatically sets the appropriate selection from the “AV mode” menu depending on the lighting conditions and the type of programme watched.
STANDARD	For a highly defined image in a normally bright room
MOVIE	For a movie
GAME (Standard/ High motion)	Suitable for game playing. You can configure the settings according to the type of the game. (Refer to page 42)
PC*	For PC. (Available only when inputting a PC signal.)
USER	Allows the user to customise settings as desired. You can set the mode for each input source.
DYNAMIC	For a clear-cut image emphasising high contrast for sports viewing.
DYNAMIC (Fixed)	Changes the image and sound settings to the factory preset values. No adjustments are allowed.
STANDARD (3D)	Refer to page 59 for details.
MOVIE (3D)	
GAME (3D)	

NOTE
- You can select a different “AV mode” item for each input mode. (For example, select “STANDARD” for TV input and “DYNAMIC” for VIDEO input.)
- The item marked with * is available only when selecting “HDMI 1(ARC)”, “HDMI 2”, “HDMI 3”, “HDMI 4” or “PC” from the “INPUT” in the “CH list” menu.

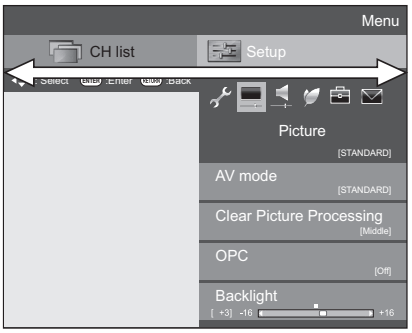
Manual picture settings

Picture adjustment

You can adjust the picture to your preference.
Follow the steps to adjust the picture.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “Picture”.



3 Press ▲/▼ to select the desired menu item.
Press **ENTER** to proceed if necessary.

4 Press ▲/▼ or ◀/▶ to select the desired item or adjust the item to the desired level. Press **ENTER** if necessary.

NOTE

- For resetting all adjustment items to factory preset values, press ▲/▼ to select “Reset”, press **ENTER**, press ▲/▼ to select “Yes”, and then press **ENTER**.
- When “Backlight” is adjusted, “OPC” is set to “Off”.

Selected item	◀button	▶button
Clear Picture Processing	Reduce signal noise to improve picture quality.	
OPC	Sets whether or not the screen brightness is automatically adjusted according to the lighting condition in the room. (OPC setting: See this page.)	
Backlight	The screen dims	The screen brightens
Contrast	For less contrast	For more contrast
Brightness	For less brightness	For more brightness
Colour	For less colour intensity	For more colour intensity
Tint	Skin tones become purplish	Skin tones become greenish
Sharpness	For less sharpness	For more sharpness
Advanced	For finer picture adjustments. (See pages 41 to 43.)	
Reset	Resets all picture adjustment items to the factory preset values.	

Clear Picture Processing

Reduce signal noise to improve picture quality.

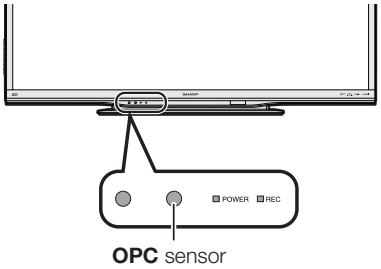
Selected item	Description
High	Improves picture quality through Clear Picture Processing at a level above “Middle”.
Middle	⇕
Off	Clear Picture Processing off.

OPC (Optical Picture Control) setting

You can set the TV to automatically adjust the screen to suitable backlight brightness according to the lighting conditions.

Using “OPC” on the menu screen

Selected item	Description
Off	The brightness is fixed at the value set in “Backlight” (See this page).
On	Automatically adjusts
On: Display	Displays the OPC effect on the screen while adjusting the brightness of the screen.



OPC sensor

NOTE

- Make sure no object obstructs the OPC sensor, which could affect its ability to sense surrounding light.

Advanced picture settings

The advanced settings enable you to set the picture adjustment in more detail.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “Picture”.

3 Press ▲/▼ to select “Advanced”, and then press **ENTER**.

4 Press ▲/▼ to select the desired menu, and then press **ENTER**.

C.M.S.-hue

This function adjusts the hue of a selected colour using a six-colour adjustment system.

C.M.S.-saturation

This function increases or decreases the saturation of a selected colour using a six-colour adjustment system.

C.M.S.-value

This function makes the image brighter or darker depending on the value of the setting.

Colour temp. (Colour temperature)

Adjusts the colour temperature to give the best white image.

Selected item	Description
High	White with bluish tone.
Mid-High	Intermediate tone between “High” and “Middle”.
Middle	Natural tone.
Mid-Low	Intermediate tone between “Middle” and “Low”.
Low	White with reddish tone.
10 point * setting	Finely adjusts each colour temperature between 1 to 10 points.
R/G/B Gain (LO), R/G/B Gain (HI)	Adjusts the white balance by changing the value of each item.

NOTE

- The item marked with * is available only when selecting “STANDARD”, “MOVIE”, “STANDARD (3D)”, or “MOVIE (3D)” from the “AV mode” menu.

Fine Motion

Using the advanced Fine Motion function can view the high speed motion image more clearly.

Selected item	Description
Enhanced	Make the motion image clearer with the frame interpolation technology and the backlight control technology.
Standard	Reduce smearing with the frame interpolation technology. When “Low” is set, the original image quality is preserved.
Low	
Off	Turn off the Fine Motion function.

NOTE

- “Fine Motion” may cause image noise. If this occurs, turn the function to “Off”.

Game type

Adjusts the images of fast moving video games to be clearer.

Selected item	Selected item
Standard	Optimises picture quality for standard video games.
High motion	Produces a sharp picture from the original slow-moving picture in a video game.

NOTE

- It can be used only when AV mode is GAME and input signal is 60Hz.

Gamma adjustment

Adjust mid-level brightness. The adjustment range of the gamma can be set to a maximum of +2 and a minimum of -2 by pressing ◀ or ▶.

Film mode

Automatically detects a film-based source (originally encoded at 24/25 frames/second, depending on the vertical frequency), analyses it then recreates each still film frame for high-definition picture quality.

Selected item	Selected item
Advanced	Adjust effect to reduce judder from film contents. Select a desired level of judder reduction from 0 to +10.
Standard	Display every picture frame in equal time, feeling like watching in cinema.
Off	Film mode off.

NOTE

- Film mode is not selectable depending on the input signal type.

Active contrast

Automatically adjusts the contrast of an image according to the scene.

DNR (Digital Noise Reduction)

Reduces noise on screen and produces a clearer video image. (“Auto”, “High”, “Middle”, “Low”, “Off”).

Advanced picture settings (Continued)

■ Range of OPC

The brightness level range of the OPC sensor's automatic adjustments can be set according to your preferences. The adjustment range of the OPC sensor can be set to a maximum of +16 and a minimum of -16.

Selected item	Description
Max.	-15 through +16
Min.	-16 through +15

NOTE

- This function is available only when the OPC setting is set to On or On: Display.
- The maximum setting cannot be set to a smaller number than the minimum setting.
- The minimum setting cannot be set to a bigger number than the maximum setting.
- The maximum and minimum settings cannot be set to the same number.
- Depending on the brightness of the surrounding light, the OPC sensor might not operate if the adjustment range is small.

Other picture settings

Adjusting the image position

For adjusting a picture's horizontal and vertical position.

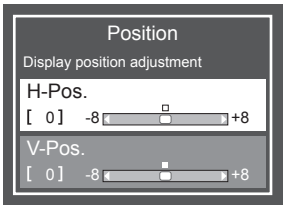
1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select "Option".

3 Press ▲/▼ to select "Screen effect" and then press **ENTER**.

4 Press ▲/▼ to select "Position", and then press **ENTER**.

5 Press ▲/▼ to select "H-Pos." or "V-Pos.".



Selected item	Description
H-Pos.	Centres the image by moving it to the left or right.
V-Pos.	Centres the image by moving it up or down.
Reset	Resets all adjustment items to the factory preset values.

6 Press ◀/▶ to adjust the item to your desired position.

NOTE

- For resetting all adjustment items to the factory preset values, press ▲/▼ to select "Reset", and then press **ENTER**.
- **Adjustments are stored separately according to input source.**
- Images may not be displayed properly depending on the settings and/or signals.
- This function is available for 3D images converted from 2D images or normal 2D images.

Game play time

This function displays the elapsed game time so you do not lose track of the time.
To display the elapsed time, select "GAME" under "AV mode" for the input mode of the terminal connected to the game console before starting the game.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select "Option".

3 Press ▲/▼ to select "Game play time".

4 Press ◀/▶ to select "On".

Selected item	Description
On	The elapsed time is displayed every 30 minutes when you switch to GAME mode in external input mode.
Off	No adjustment

NOTE

- "Game play time" is displayed in the external input mode.
- "Game play time" is reset after performing the following operations:

1. When toggling the input.
2. When changing "AV mode".

Wallpaper setting

This function is available only when “Quick start” is set to “On (Wallpaper)”.

Press “POWER” of the R/C to start or end the wallpaper, if you want to quit the wallpaper, please set the “Quict start” to “Off” or “On”.

Activating the function will display still images when the TV is in standby mode.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “Option”.
3. Press ▲/▼ to select “Wallpaper setting” , and then press **ENTER**.
4. Press ▲/▼ to select desired items, and then press **ENTER**.

Data source

For the wallpaper, you can select either the still images pre-installed in the TV or your favourite still images stored in the USB device.

Selected item	Selected item
Pre-installed	The images pre-installed in the TV will be displayed in a slideshow.
USB	Images stored for the wallpaper will appear. If only a single still image is stored in the USB device, that image will be displayed as the wallpaper. When there are multiple still images in the memory, all the images will be displayed in a slideshow.

NOTE

- Images are displayed as a slideshow in 3-minute intervals.
- As a USB device cannot be detected immediately after the TV is turned on from standby mode, the wallpaper pre-installed in the TV may be displayed even when “Data source” is set to “USB”.

When you display images by using the USB device:

- Create a folder named “WP” in the root directory of the USB device (the first directory when the USB device is opened), and store into the folder the still images you want to display for the wallpaper.
- You must insert the USB device into the USB terminal before turning off the TV.

Timer setting

You can set the length of time the TV will remain in the Wallpaper mode (3 hours/6 hours/12 hours/24 hours).

NOTE

- Setting “Quick start” to “On” consumes more power.
- No buttons except for “POWER” work even while the still images are being displayed.
- If the ready-for-use USB device is not inserted, the still images pre-installed in the TV will be displayed in a slideshow even when “Data source” is set to “USB”.
- The still images will be displayed until the set time has elapsed.
- If you do not want to use the wallpaper as described above, set “Quick start” to “On” or “Off”.

Boot picture

With this function activated, the SHARP logo will be displayed when you turn on the TV.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “Option”.
3. Press ▲/▼ to select “Boot picture” , and then press **ENTER**.
4. Press ▲/▼ to select desired items, and then press **ENTER**.

NOTE

- This function is not available when the "Quick Start" is set to "On" or "On(wallpaper)".

Indicating time on the screen

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “View setting”.
3. Press ▲/▼ to select “Individual setting” and then press **ENTER**.
4. Press ▲/▼ to select “Clock setup” and then press **ENTER**.
5. Press ▲/▼ to select the desired item and then press **ENTER**.

■ Time adjustment

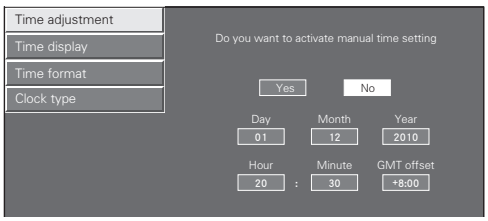
When the TV cannot receive the time via digital broadcast, perform “Manual timer setting” after setting the clock.
Input the current time difference between your area and GMT (Greenwich Mean Time).

Example of time difference with GMT

Local	GMT off set
Hong Kong	+8:00

NOTE

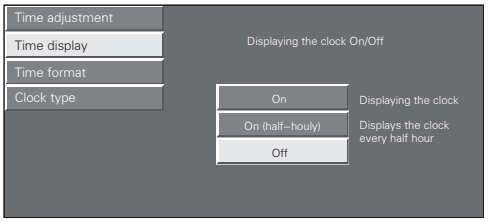
- If you select “No”, the TV will try to get the time for the broadcast.
- You cannot set the manual clock setting during USB recording.



■ Time display

This function allows you to display the clock time in the lower-right corner of the screen.

Press ▲/▼ to select the desired item and then press **ENTER**.



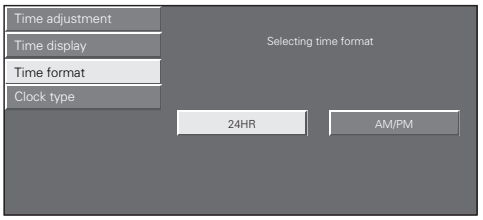
NOTE

- When “On” is set, you can press DISPLAY on the remote control to show or hide the time information.

■ Time format

You can select the time format (either 24HR or AM/PM) for the clock time.

Press ◀/▶ to select the desired time format and then press **ENTER**.



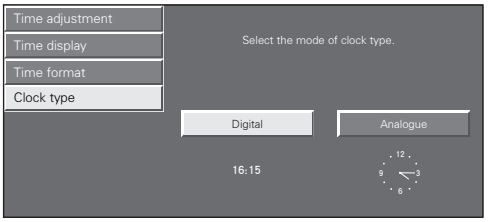
NOTE

- The displayed time may differ depending on the programmes because of the programme information.

■ Clock type

You can select the clock type (either “Digital” or “Analogue”).

Press ◀/▶ to select the desired clock type and then press **ENTER**.



NOTE

- You cannot set the “Clock type” in either the USB media mode or the Home network mode. Even if you selected “Analogue”, a “Digital” clock is still displayed in these two modes.

Audio adjustment

You can adjust the audio of the selected AV mode.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “Audio”.

3 Press ▲/▼ to select the desired menu item.
Press **ENTER** to proceed if necessary.

4 Press ▲/▼ or ◀/▶ to select the desired item or adjust the item to the desired level. Press **ENTER** if necessary.

Selected item	◀button	▶button
Treble	For weaker treble	For stronger treble
Bass	For weaker bass	For stronger bass
Balance	Decrease audio from the right speaker	Decrease audio from the left speaker

NOTE

- For resetting all adjustment items to the factory preset values, press ▲/▼ to select “Reset”, press **ENTER**, press ▲/▼ to select “Yes”, and then press **ENTER**.

■ Surround

The surround function produces a surround effect from the speakers.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “Audio”.

3 Press ▲/▼ to select “Surround”, and then press **ENTER**.

4 Press ▲/▼ to select the desired item.
Press **ENTER** to proceed if necessary.

Selected item	Description
3D Stadium	Reproducing lifelike experience of excitements such that live sports or concert performances in a stadium create.
3D Hall	Reproduces a concert hall experience with realistic live surround sound based on reverberant sounds measured in a concert hall.
3D Movie	Reproduces a movie theater experience with realistic live surround sound based on reverberant sounds measured in a movie theater.
3D Standard	Creates three-dimensional surround sound with detailed control of the signal phase.
Normal	Provides limited surround sound.
Off	Outputs normal sound.

■ Bass enhancer

This function allows you to enjoy bass-enhanced sound.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “Audio”.

3 Press ▲/▼ to select “Bass enhancer”.

4 Press ◀/▶ to select “On” or “Off”.

Automatic volume adjustment

Different sound sources sometimes do not have the same volume level, such as a programme and its commercial breaks. The automatic volume control (Auto volume) reduces this problem by equalizing levels.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “Audio”.

3 Press ▲/▼ to select “Auto volume”, and then press **ENTER**.

4 Press ▲/▼ to select “High”, “Middle”, “Low” or “Off”, and then press **ENTER**.

Selected item	Description
High	Reduces the volume gaps among different sound sources strongly.
Middle	Operates on a level between “High” and “Low”.
Low	Reduces the volume gaps among different sound sources slightly.
Off	Does not reduce the volume gaps among different sound sources.

Clear voice

This function emphasises speech against background noise for greater intelligibility.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “Audio”.

3 Press ▲/▼ to select “Clear voice”.

4 Press ◀/▶ to select “On” or “Off”.

Wall mount audio setup

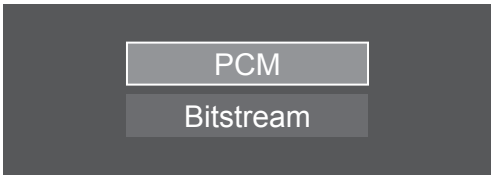
When you mount the TV on a wall, you can adjust the sound to a more suitable one by setting this function to “Yes”.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “View setting”.
3. Press ▲/▼ to select “Wall mount audio setup”, and then press **ENTER**.
4. Press ▲/▼ to select “Yes”, and then press **ENTER**.

Digital audio output

This function allows you to select your favourite audio output system.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “Option”.
3. Press ▲/▼ to select “Terminal setting”, and then press **ENTER**.
4. Press ▲/▼ to select “Digital audio output”, and then press **ENTER**.
5. Press ▲/▼ to select your desired output system, and then press **ENTER**.



Selected item	Description
PCM	The optical output format is normally in PCM.
Bitstream	Dolby Digital or DTS is output when the Dolby Digital or DTS audio formats are received.

NOTE

- Analog channel audio and video input audio are output in PCM mode even when "Bitstream" is selected.
- PCM digital input signals are output in PCM mode even when "Bitstream" is selected.

Headphone/Audio out select

You can select which device is used for outputting audio.

1. Press **MENU** and the MENU screen displays.
2. Press ▲/▼ to select “Terminal setting”, and then press **ENTER**.
3. Press ▲/▼ to select “Headphone/Audio out select”, and then press **ENTER**.
4. Press ▲/▼ to select the desired item, and then press **ENTER**.

Selected item	Description
Headphone	Output audio through headphones.
Audio out	Output audio through an A/V receiver or surround audio controller.

CAUTION

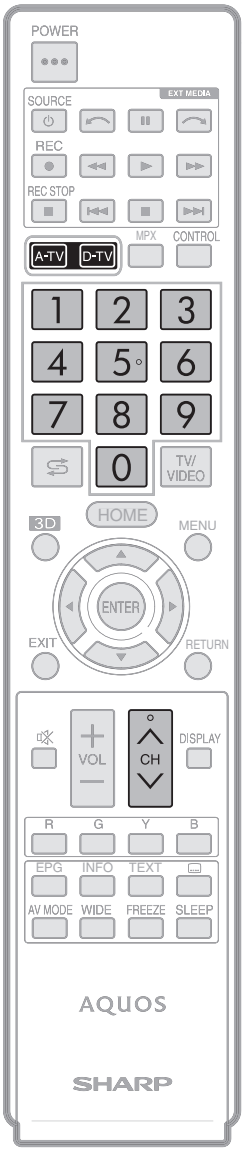
- This terminal is also used for headphones. Reduce the volume before using headphones. Overwhelming sound may damage your hearing.

NOTE

- For resetting all adjustment items to factory preset values, press▲/▼ to select “Reset”, press **ENTER**, press ▲/▼ to select “Yes”, and then press **ENTER**.
- If you select “Audio out” when a cable is inserted in the AUDIO OUT terminal, the TV speakers are muted.
- When you select “Audio out”, you can adjust the TV sound volume with the **VOL**+/− buttons on the TV or on the remote control unit.

A-TV (Analogue TV)/D-TV (Digital TV) buttons

Use the following buttons on the remote control to operate the menu.



A–TV (Analogue TV): Press to switch to analogue TV mode. After switching from digital TV or external input mode to analogue TV mode, the TV jumps to the most recently viewed analogue channel.

D–TV (Digital TV): Press to switch to digital TV mode. After switching from analogue TV or external input mode to digital TV mode, the TV jumps to the most recently viewed digital TV channel.

When you watch the TV for the first time

When the TV powers on for the first time after purchase, perform the auto installation.

A-TV (Analogue TV)

You can run the auto installation to set channels automatically.

1. To watch the analogue TV, select “Auto installation” from “Setup” menu. (See page 26.)
2. After setting the channels, you can select a channel using **CH**∧/∨ or **0**-**9** on the remote control unit. (See page 27.)

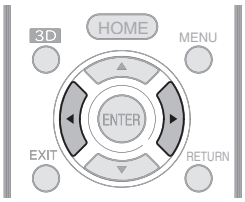
D-TV (Digital TV)

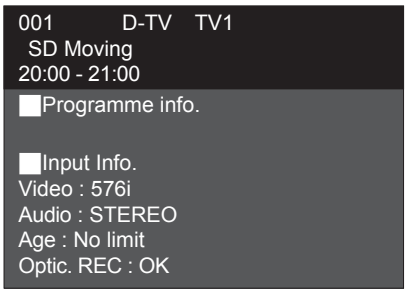
You can run the auto installation to set channels automatically.

1. To watch D-TV broadcasts, select “Digital Search” from “Auto installation” menu. (See page 23.)
2. After setting the channels, you can select a channel using **CH**∧/∨ or **0**-**9** on the remote control unit. (See page 27.)

Info

While watching D-TV you can check the extended programme information on the screen using **INFO** on the remote control.





- If there is more information, pressing ◀/▶ allows you to go to the next page or return to the previous page.
- You can cancel this info by pressing **INFO** again.

Using Info on the menu screen

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “Option”.
3. Press ▲/▼ to select “Option for view” and then press **ENTER**.
4. Press ▲/▼ to select “Programme info.” and then press **ENTER**.

EPG

What is an EPG?

An “EPG” (Electronic Programme Guide) is a programme schedule, which is displayed on the TV screen. The EPG is broadcasted together with D-TV. The TV screen shows the EPG when the viewer presses **EPG** on the remote control, provided that the TV is receiving the digital broadcasting signal. The EPG enables you to search for a programme, view the programme schedule in detail.

Basic settings

EPG (Electronic Programme Guide) is a programme list that is displayed on the screen. With the EPG, you can check the schedule of D-TV, view detailed information about them, tune to an event currently on-air and set a timer for future events.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “View setting”.
3. Press ▲/▼ to select “Individual setting”, and then press **ENTER**.
4. Press ▲/▼ to select “Standby search” and then press **ENTER**.
5. Press ▲/▼ to select “EPG”.
6. Press ◀/▶ to select the desired item.

■ EPG (setting for receiving EPG data)

EPG setup must be selected to “Yes” to enable automatic capturing of data for all available channels while the TV set is in standby mode. If EPG is set to “No”, only EPG data for the current channel will be updated.

Selecting EPG to “Yes” will result in higher power consumption*.
Selecting EPG to “No” will save power consumption.

* Approximately 21W for 15-30 minutes (depending on number of channels tuned) after power off from remote control.

NOTE

- EPG data will not update if the TV is turned off from the main power switch.

EPG display settings

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “Option”.
3. Press ▲/▼ to select “EPG setup”, and then press **ENTER**.
4. Press ▲/▼ to select “Display range setup” or “Genre icon setup” and then press **ENTER**.
5. Press ▲/▼ to select the desired item.

■ Display range setup

The Display range setup allows you to select three types of time spans for display on the screen.

Selected item	Description
Mode1 (Wide angle)	Display six hours of programme information.
Mode2 (Zoom)	Display three hours of programme information.
Mode3 (Vertical angle)	Change to the EPG display format with a vertical time span.

■ Genre icon setup

You can grey out or place a mark on desired genres and smoothly search for programmes you frequently watch.

Genre icon list

Icon	Genre	Icon	Genre
	Movie/Drama		Music/Ballet/Dance
	News/Current affairs		Arts/Culture (without music)
	Show/Game show		Social/Political issues/Economics
	Sports		Education/Science/ Factual topics
	Children’s/Youth programmes		Leisure hobbies

NOTE

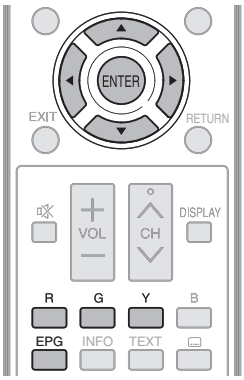
- You can easily distinguish the Genre icons by darkening or lightening the icon’s shade.

Selecting a programme using EPG

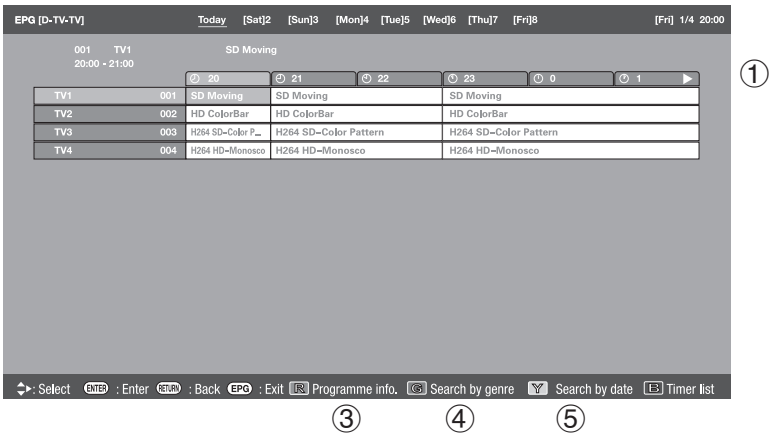
Basic operation

■ Display the EPG screen

Press **EPG**.



②


EPG [D-TV-TV]
Today [Sat]2 [Sun]3 [Mon]4 [Tue]5 [Wed]6 [Thu]7 [Fri]8
[Fri] 1/4 20:00
001 TV1
20:00 - 21:00
SD Moving
20 21 22 23 0 1
TV1 001 SD Moving SD Moving SD Moving
TV2 002 HD ColorBar HD ColorBar HD ColorBar
TV3 003 H264 SD-Color P... H264 SD-Color Pattern H264 SD-Color Pattern
TV4 004 H264 HD-Monosco H264 HD-Monosco H264 HD-Monosco
: Select ENTER : Enter RETURN : Back EPG : Exit R Programme info. G Search by genre Y Search by date B Timer list

① ③ ④ ⑤

① Press ◀/▶ to select the time span you want to search.

- Continue to press ▶ to display programmes in the next time span.

② Press ▲/▼ to select the desired programme.

- If ▲ or ▼ are displayed on the left of the services, continue to press ▲/▼ to display next or previous screen.

■ Close the EPG screen

Press **EPG** again.

NOTE

- You can also display the EPG screen from “Menu” → “EPG” → “EPG”.
- The time displayed on the EPG is information sent by the TV station.

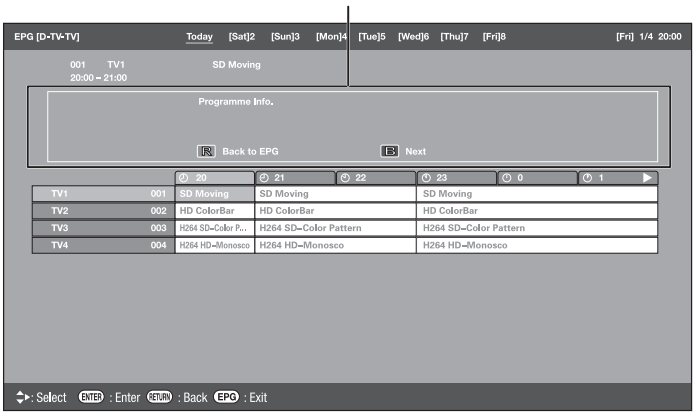
Selecting a programme

③ Check programme information

1 Press ▲/▼/◀/▶ to select the programme you want to check.

2 Press **R**.

Programme information


EPG [D-TV-TV]
Today [Sat]2 [Sun]3 [Mon]4 [Tue]5 [Wed]6 [Thu]7 [Fri]8
[Fri] 1/4 20:00
001 TV1
20:00 - 21:00
SD Moving
Programme Info.
R Back to EPG
B Next
20 21 22 23 0 1
TV1 001 SD Moving SD Moving SD Moving
TV2 002 HD ColorBar HD ColorBar HD ColorBar
TV3 003 H264 SD-Color P... H264 SD-Color Pattern H264 SD-Color Pattern
TV4 004 H264 HD-Monosco H264 HD-Monosco H264 HD-Monosco
: Select ENTER : Enter RETURN : Back EPG : Exit

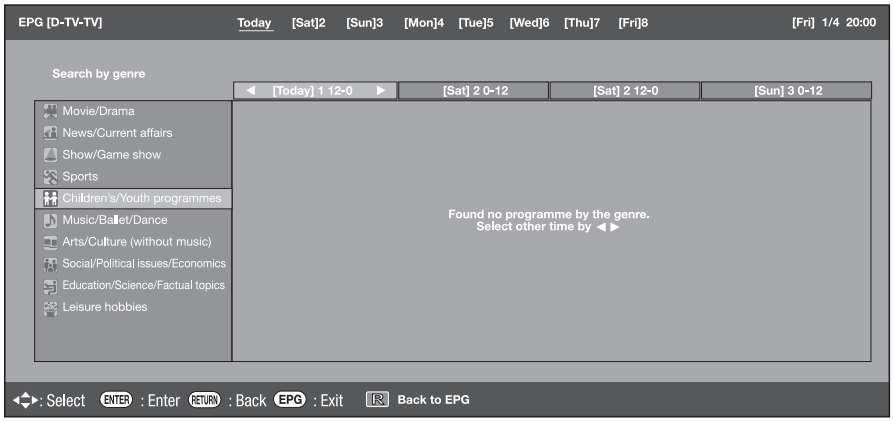
3 Press **ENTER** to tune to the selected programme.

④ Search a programme in a category

1 Press **G**.

2 Press ▲/▼ to select the desired genre, and then press **ENTER**.

3 Press ▲/▼ to select a programme you want to watch, and then press **ENTER**.



NOTE

- The genre information depends on the broadcasts.
- You can also display the EPG screen from “Menu” → “EPG” → “Search by genre”.

⑤ Search for a programme by date/time

1 Press **Y**.

2 Press ▲/▼/◄/► to select the desired time span and then press **ENTER**.

EPG [D-TV-TV]
Today [Sat]2 [Sun]3 [Mon]4 [Tue]5 [Wed]6 [Thu]7 [Fri]8
[Fri] 1/4 20:00
Search by time
[Sat]2
Prev. ◄
0 – 6
6 – 12
12 – 18
18 – 0
► Next
◄ ►: Select time ENTER : Enter R Back to EPG G Enter Y Prev. B Next
6
7
8
9
10
11
TV1 001 SD Moving SD Moving SD Moving
TV2 002 HD ColorBar HD ColorBar HD ColorBar
TV3 003 H264 SD-Color P... H264 SD-Color Pattern H264 SD-Color Pattern
TV4 004 H264 HD-Monosco H264 HD-Monosco H264 HD-Monosco
: Select ENTER : Enter RETURN : Back EPG : Exit

3 Press ▲/▼ to select the desired programme, and then press **ENTER**.

NOTE

- When you select a programme outside of the current time span, the timer setting screen displays. (See page 53.)

Timer setting using EPG

You can select TV programmes using data from the EPG.

1 Press **EPG**.
- You can also enable this function from “Menu” → “EPG ” → “EPG”.

2 Press ▲/▼/◀/▶ to select the programme you want to set, and then press **ENTER**.

3 Press ◀/▶ to select the timer setting, and then press **ENTER**.
- If you select “No”, the TV returns to the EPG screen.

■ Selecting “Watch” or “Record”in the timer setup screen

This setting allows you to switch to a programme at a set time.

① Press ◀/▶ to select “Watch” or “Record”, and then press **ENTER**.

② Press ◀/▶ to select “Yes”, and then press **ENTER**.

③ Press **ENTER** to set time.
- The selected TV programme is marked with an icon.

NOTE
- You cannot select “Record” when the registered USB HDD is not connected to the USB port.
- A combined total of 16 timer settings (“Watch” and “Record”) can be set.

Cancelling the timer setting

1 Press **EPG**.
- You can also enable this function from “Menu” → “EPG” → “EPG” .

2 Press ▲/▼/◀/▶ to select the programme on timer setup, and then press **ENTER**.

3 Press ◀/▶ to select “Cancel”, and then press **ENTER**.

4 Press ◀/▶ to select “Yes”, and then press **ENTER**.

5 Press **ENTER** to cancel timer setup.

■ Cancelling using B button on the remote control

1 Press **EPG**.

2 Press **B** to display the timer list screen.

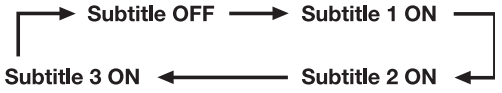
3 Press ▲/▼ to select a programme you want to change, and then press **ENTER**.

4 Press ◀/▶ to select “Cancel”, and then press **ENTER**.

5 Press ◀/▶ to select “Yes”, and then press **ENTER**.

Switching subtitle languages

Each time you press 💬 on the remote control, the subtitle switches.



NOTE
- When there is no subtitle broadcast, “No subtitle Data” will be displayed.
- The number of subtitle languages available differs depending on the programme.

Text

MHEG-5 data broadcast is scheduled in Hong Kong. You can watch a MHEG-5 data broadcast after pressing the **TEXT** button.

NOTE
- MHEG-5 may not be displayed correctly in 3D mode.
- MHEG-5 is not displayed during USB recording or playing.

Enjoying 3D image

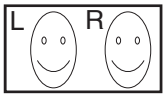
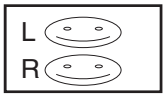
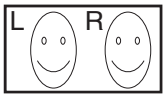
You can use special 3D glasses to watch 3D-supported images on this TV.

- You can enjoy 3D images on this TV through the supplied or optional 3D glasses that sold separately.
- To produce 3D images, liquid crystal shutters in the 3D glasses alternately open and close imperceptibly fast to exactly match alternating left and right video images displayed by the TV.
- Not all consumers can experience and enjoy 3D TV. Some people suffer from stereo blindness which prevents them from perceiving the intended depth of 3D entertainment. Also, some people who watch 3D programming may experience initial feelings of motion sickness as they adjust to the picture. Others may experience headaches, eye fatigue or continued motion sickness, or some viewers might also experience epileptic seizures or strokes. Like a roller coaster, the experience is not for everyone.

CAUTION

- The 3D glasses are precision equipment. Handle them with care.
- Improper use of the 3D glasses or failure to follow these instructions can result in eye strain.
- If you experience dizziness, nausea, or other discomfort while viewing 3D images, immediately discontinue use of the 3D glasses. Using the binocular disparity 3D system of this TV with incompatible 3D broadcasts or software can make images appear with a cross talk blur or create overlapping images.
- When viewing 3D images continuously, be sure to take a break periodically to prevent eye strain.
- If you are nearsighted or farsighted or have astigmatism or a different level of eyesight between the left and right eyes, you should take the necessary steps, such as wearing eyeglasses, to correct your eyesight before viewing 3D images. The 3D glasses can be worn over eyeglasses.
- When viewing 3D images, keep the 3D glasses horizontally level with the TV screen. If you tilt the 3D glasses with respect to the TV screen, the images viewed by the left and right eyes may appear significantly different or images may appear overlapping.
- View 3D images at the appropriate distance from the TV screen. The recommended distance is three times the effective height of the TV screen. Viewing should not be done closer than the recommended distance.
- Be careful of your surroundings when viewing 3D images. When you view 3D images, objects may appear at a distance closer or farther than the actual TV screen. This may cause you to misjudge the distance to the TV screen and possibly result in injury if you accidentally hit the screen or surrounding objects.
- The 3D glasses are not recommended for people aged below 6 years old.
- When children are viewing 3D images, be sure a parent or guardian is present. Monitor children viewing 3D images, and if they show signs of discomfort, immediately discontinue use of the 3D glasses.
- People with a known history of photosensitivity and people with heart problems or poor health should not use the 3D glasses. This can worsen existing health conditions.
- Do not use the 3D glasses for other purposes (such as general eyeglasses, sunglasses, or protective goggles).
- Do not use the 3D function or 3D glasses while walking or moving around. This may result in injuries due to running into objects, tripping, and/or falling.
- When using the 3D glasses, take care not to accidentally strike the TV screen or other people. Viewing 3D images may cause you to misjudge the distance to the TV screen and accidentally strike the screen, resulting in possible injury.
- It is recommended that you do not view 3D images if you are sleep deprived or if you have been drinking alcohol.

Display format for 3D and 2D images

	Display format	Displays for input signals	Description
3D mode (using the 3D glasses)	2D → 3D		• Converts normal 2D images into 3D images.
	Side by Side		• Creates 3D images from 3D images displayed side by side. The image is split into a left and right image, and then the images are stretched and displayed sequentially to create a 3D image.
	Top and Bottom		• Creates 3D images from 3D images displayed on the top and bottom. The image is split into a top and bottom image, and then the images are stretched and displayed sequentially to create a 3D image.
2D mode (without using the 3D glasses)	Side by Side → 2D		• Creates 2D images from 3D images displayed side by side. Only the left image is stretched and displayed. The image does not appear in 3D.
	Top and Bottom → 2D		• Creates 2D images from 3D images displayed on the top and bottom. Only the top image is stretched and displayed. The image does not appear in 3D.

You can enjoy 3D-supported images on the TV when you wear the supplied 3D glasses or optional 3D glasses.

NOTE

- Some menu items are greyed out in 3D mode. This is not a malfunction.

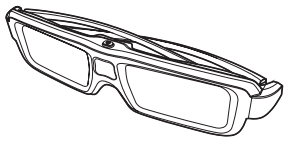
Preparing for the 3D glasses

Confirm how to use the 3D glasses before watching 3D-supported images. These 3D glasses are only for use with SHARP LCD TVs supporting 3D.

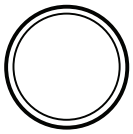
Accessories for supplied 3D Glasses

Please make sure that the following accessories are along with 3D glasses.

3D Glasses (×2)



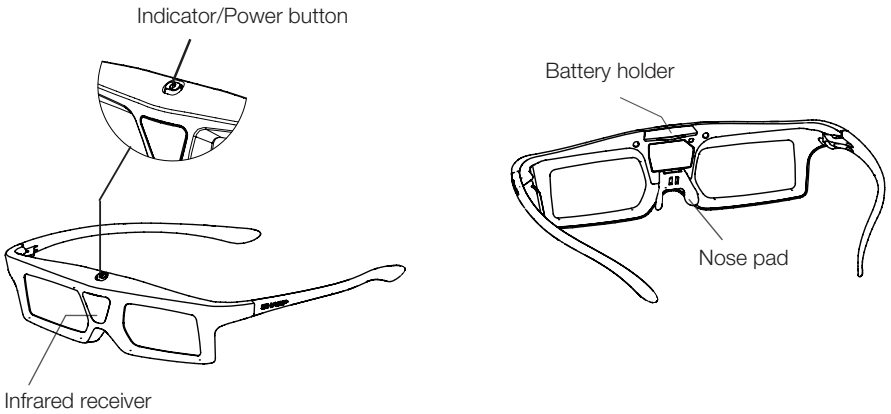
Button Battery CR2025 (×2)



NOTE

- The illustration above is for reference. They may be slightly different from the actual accessories.
- CR2025 button battery have been installed in the 3D glasses.

Parts name



NOTE

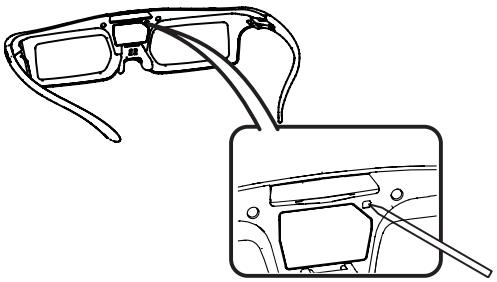
- Do not soil or apply stickers or other obstacles to the infrared receiver. Doing so may block signals from the TV and prevent the 3D glasses from working properly.
- Interference from other infrared communications equipment may prevent you from viewing 3D images correctly.
- Before using the 3D Glasses for the first time, remove the insulating sheet attached to them.

Battery assembly

The battery has an expected service life of approximately 120 hours.

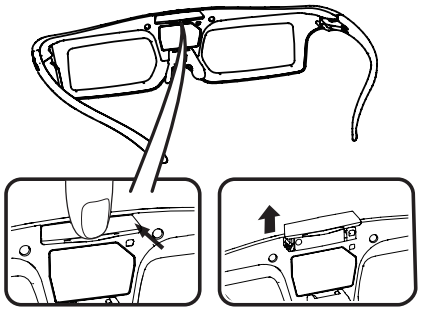
- When replacing the button battery, use only the designated battery (CR2025 lithium button battery).

① Use the tip of a ballpoint pen or similar object to press in on the lock.



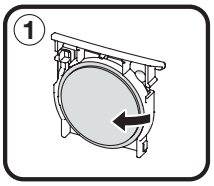
② While pressing in on the lock, place your fingertip in the groove and pull out the battery holder.

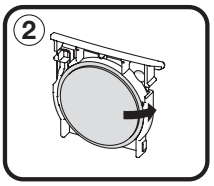
- Pull the battery holder all the way out.



③ Replace the battery.
Remove the battery according to the arrow direction. Insert a new battery.

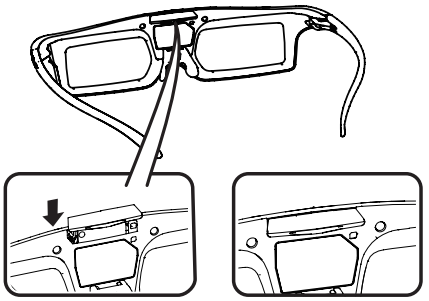
- Insert the battery with the negative side facing up.



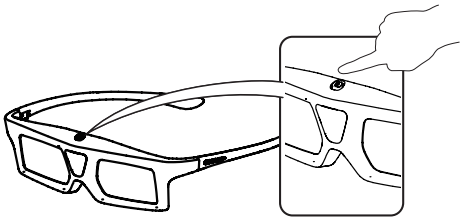


④ Align the battery holder with the battery slot on the 3D Glasses and slide it back into place.

- Press it in until it locks.



Using the 3D glasses



Turn on/off the power

Turn on the Power

- Press power button for at least 3 seconds.
- LED indicator lights up in green for 2 seconds and then starts slow blinking (once every 3 seconds).
- If the LED indicator lights up in red and blinks every 3 seconds, the glasses is in 2D mode. Please refer to the instruction below.

Turn off the power

- Press power button for at least 3 seconds.
- LED indicator lights up in red for 2 seconds then the power is turned off.

Selecting the 2D and 3D modes

When viewing 3D images, you can select between 2D and 3D modes. This is useful when several people are viewing 3D images on the same TV with some people wanting to watch in 3D and some people wanting to watch in 2D.

The 3D glasses will shift between 2D and 3D mode every time you press the power button. When the TV is in 3D mode, you can choose to watch 2D or 3D image via the 3D glasses.

- In 3D mode, LED indicator is in green and blinks every 3 seconds.
- In 2D mode, LED indicator is in red and blinks every 3 seconds.

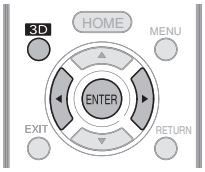
Usage range of the 3D glasses

The 3D glasses can be used by receiving an infrared signal sent from the TV.
The 3D glasses turn off automatically after 10 minutes if no signal is received from the TV.

Operating range

From directly in front of the 3D infrared transmitter on the TV: approx. 5 m (within approx. 30° horizontally and 20° vertically)

Viewing 3D images



NOTE

- The TV screen may temporarily become black when the TV is trying to detect a 3D image signal and when switching from 3D to 2D mode.

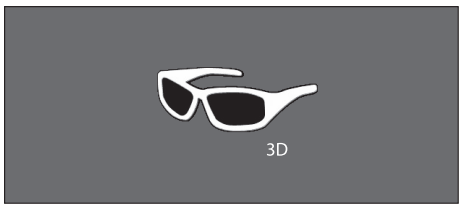
Receiving a 3D image signal that can be detected automatically

The image signal may contain a 3D identification signal. You can enable the TV to automatically detect the 3D image type (See page 54).

1 Go to "Menu" → "Setup" → "Option" → "3D setup" → "3D auto change".

● When "3D auto change" is set to "Mode1"or "Mode2"

- The 3D display format is detected automatically and the appropriate 3D image is displayed.



● When "3D auto change" is set to "Off"

① The confirmation message is displayed. Press **3D**.
② Press ◀/▶ to select "Yes", and then press **ENTER**.

2 Turn on the power of the 3D glasses, and then wear the 3D glasses.

NOTE

- If you do not want to switch to 3D mode automatically, set "3D auto change" to "Off".
- When the TV is receiving a 3D image signal that can be detected automatically, the 3D mode icon is displayed in the channel display.

Switching 3D to 2D mode

When you press **3D** while you are watching the TV in 3D mode, the TV switches to 2D mode.

1 Press **3D** during the 3D mode.

2 Select "Yes", and then press **ENTER** to switch to 2D mode.

3 Take off the 3D glasses and turn off the power of the 3D glasses.

NOTE

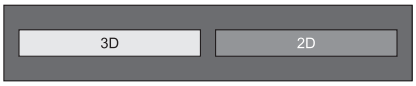
- If the input signal switches to 2D, 2D images are displayed automatically.
- 3D mode is canceled automatically when the setting is changed, input source is changed, the input signal resolution is changed or the power is turned off.

Receiving a 3D image signal that cannot be detected automatically

When the TV receives a 3D image signal that cannot be detected automatically, you can select between 3D and 2D image viewing.

1 Press **3D**.

- A screen appears prompting you to select between 3D and 2D image viewing.



2 Press ◀/▶ to select "3D" or "2D", and then press **ENTER**.

● To view in 3D mode

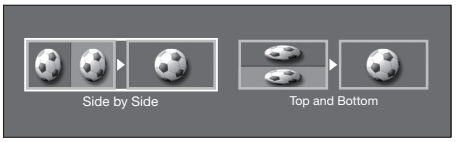
① Press ◀/▶ to select the 3D signal type ("2D → 3D","Side by Side" or "Top and Bottom"), and then press **ENTER**.

- You can select only "2D → 3D" in A-TV mode.
- If you select the same system as that of the input signal, 3D images are displayed.

② Turn on the power of the 3D glasses, and then wear the 3D glasses.

● To view in 2D mode

- Switching from 3D to 2D mode.
  Press ◀/▶ to select the 2D signal type ("Side by Side" or "Top and Bottom"), and then press **ENTER**.



- If you select the same system as that of the input signal, 2D images are displayed.

Watching 2D images in 3D

You can convert normal 2D images into 3D images.

1 Press **3D**.

2 Press ◀/▶ to select “2D → 3D”, and then press **ENTER**.

3 Turn on the power of the 3D glasses, and then wear the 3D glasses.

NOTE

- The confirmation message to select either 3D or 2D mode is displayed on the screen once per hour.
- When the TV converts normal 2D images into 3D images, you can display the “2D → 3D convert effect” menu to adjust the convert effect by pressing **R**.

Switching to the previous mode

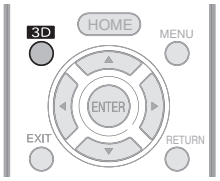
You can switch back to the previous mode by pressing **3D**.

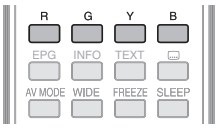
1 Press **3D**.
- A confirmation message is displayed.

2 Select “Yes”, and then press **ENTER**.
- The TV returns to the previous mode.

3D menu

Pressing **3D** in 3D mode displays the 3D menu. Press the coloured buttons to make the necessary settings.





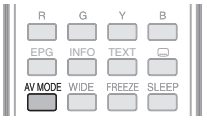
Buttons	Description
R button	2D → 3D convert effect. (See page 60.) • “2D → 3D convert effect” is available only when selecting “2D → 3D”. (refer to **Watching 2D images in 3D** shown above.)
Y button	3D surround. (See page 46.) • The surround mode changes each time you press **Y**.
B button	3D setup. (See page 60.)

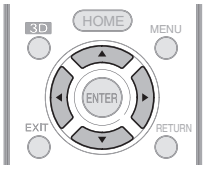
NOTE

- The keys are available only before the 3D menu disappears.

Configuring the TV settings to enhance 3D image viewing

You can make various settings to enhance 3D image viewing.





3D picture adjustments

● Basic operation

Go to “Menu” → “Setup” → “Picture” → select/adjust the item you want to set.

NOTE

- Which items can be selected/adjusted differs depending on whether the TV is in 2D mode or in 3D mode.

■ AV mode

The audio and video settings can be changed to suit the programme or input content being watched.

Selected item	Description
STANDARD (3D)	For a highly defined image in a normally bright room.
MOVIE (3D)	For a movie.
GAME (3D)	Lowers image brightness for easier viewing.

NOTE

- You can select “AV mode” by pressing **AV mode** on the remote control unit.

3D setup

Basic operation

Go to “Menu” → “Setup” → “Option” → “3D setup” → select the menu you want to set.

3D auto change

This function allows the TV to switch to 3D mode automatically when a 3D identification signal is detected.

Selected item	Description
Mode1	Switches 3D image detecting 3D identification signal.
Mode2	Switches 3D image detecting 3D pattern plus mode1.
Off	Automatic change is not performed.

NOTE

- 3D signals may not be detected depending on the signal format.
- When selecting “Mode 2”, the TV maybe misjudge non-3D content as 3D content. In this case, please select “Mode 1” or “Off”.

2D → 3D convert effect

You can adjust the 3D effect when converting images from 2D mode to 3D mode. Select a desired level of convert effect from +1 to +16.

NOTE

- This function is only available when converting 2D images to 3D images.
- When you use this function, image conversion on the TV will result in some differences in the original images and how they appear.
- 2D images that have been converted to 3D images may be viewed only for personal use.

3D depth control

Select the method for adjusting the 3D still image effect (depth).

Selected item	Description
Auto	Adjusts the still image effect (depth) automatically.
Manual	Manually adjust the still image effect (depth).

NOTE

- When you manually adjust the still image effect (depth), please note that the greater the deviation from the center, the more easily eye fatigue can be caused.
- This function can be adjusted when viewing 3D still images in USB mode.
- Even if you selected “Auto”, the 3D still image effect (depth) may not be correctly adjusted depending on the 3D still image.
- 3D still images taken in macro mode will be displayed with excessive depth.
- If you experience discomfort while viewing 3D images, immediately stop viewing.
- “Auto” is not available when converting 2D images to 3D images.

Viewing time info

This function allows you to display the elapsed time of 3D image viewing on the screen.

Selected item	Description
Yes	The elapsed time is displayed in one-hour increments after you start watching 3D images.
No	Hide the time.

3D test

This function displays 3D images for testing the 3D operation. Clicking “Start” on the screen plays back 3D test images.

NOTE

- If you press **EXIT** during playback, the previous screen will be displayed.

Specifications – 3D glasses

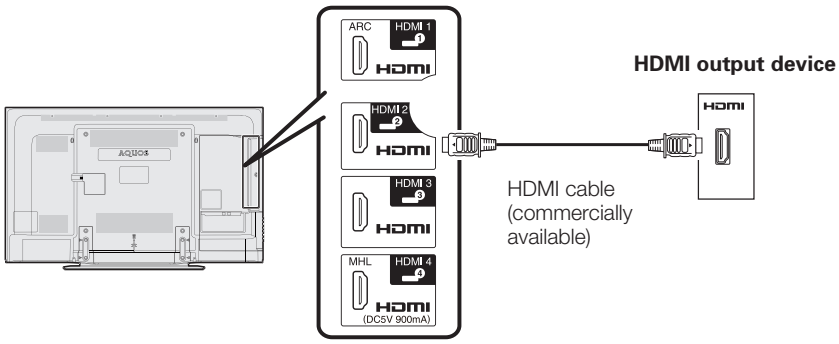
Name Of Product	3D Glasses
Type Of Lens	LCD Active Shutter
Power	DC 3V
Battery	Lithium Button Battery (CR2025)
Battery Life	Approx. 120 hours for continuous use
Dimension (Width x Height x Depth)	162.5 × 39.4 × 168 mm
Weight	Approx. 30g (Including Lithium Button Battery)
Operating Temperature	Do not use 3D glasses at extremely high or low temperature. Otherwise it will affect the performance of 3D glasses and battery life.

Settings when using external devices

Settings when using HDMI output devices

HDMI terminals can carry audio and visual signals to the TV with an HDMI certified cable. When you want to output the audio and picture from an HDMI output device on the TV, select “HDMI 1(ARC)”, “HDMI 2”, “HDMI 3” or “HDMI 4” by switching the input source.

Connecting an HDMI output device



■ HDMI (High-Definition Multimedia Interface) Auto View

1 To watch an HDMI equipment image, select “HDMI 1(ARC)”, “HDMI 2”, “HDMI 3” or “HDMI 4” using **TV/VIDEO** on the remote control unit or on the TV.

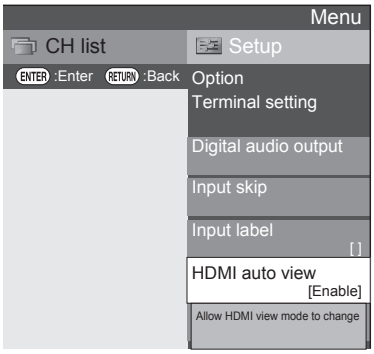
2 Press **MENU** and the MENU screen displays.

3 Press ▼/◀/▶ to select “Option”.

4 Press ▲/▼ to select “Terminal setting”, and then press **ENTER**.

5 Press ▲/▼ to select “HDMI auto view”, and then press **ENTER.**

- The HDMI auto view can be selected only when “HDMI 1(ARC)”, “HDMI 2”, “HDMI 3” or “HDMI 4” is selected.



6 Press ▲/▼ to select the desired item, and then press **ENTER**.

Selected item	Description
Enable/Disable	Set whether or not to use “Wide mode” based on signal recognition, including an HDMI signal.

NOTE

- Refer to your external equipment operation manual for the above settings.
- When connecting a DVI-HDMI conversion adaptor/cable to the HDMI terminal, the image may not come in clearly.

Controlling HDMI devices

This system is using the HDMI CEC (Consumer Electronics Control) technology.

What you can do with CEC capable using HDMI devices

✔ Single remote control operation

The TV automatically recognises the connected HDMI devices and you can use the remote control provided with this TV to control the TV and the relative devices at the same time. (See page 64 to 69)

NOTE

- Point the remote control toward the TV, not to the connected HDMI device.
- Video noise may occur depending on the type of HDMI cable used. Make sure to use a certified HDMI cable.
- These operations affect the HDMI device selected as the current input source. If the device does not operate, turn on the device and select the appropriate input source using **TV/VIDEO**.
- When you insert/remove HDMI cables or change connections, turn on all connected HDMI devices before turning on the TV. Confirm that picture and audio are correctly output by selecting “HDMI 1(ARC)”, “HDMI 2”, “HDMI 3” or “HDMI 4” from the “INPUT SOURCE” menu.

Audio select for connecting HDMI

When connecting HDMI to the HDMI 2 terminal, and inputting analogue audio signals from the AUDIO IN terminal.
Go to “MENU” → “Setup” → “Option” → “Terminal setting” → “Audio select”.

Selected item	Description
HDMI (Digital)	When connecting devices with HDMI cable to the HDMI 2 terminal.
HDMI + Analogue	When connecting devices with HDMI cable to the HDMI 2 terminal and inputting analogue audio signals from the AUDIO IN terminal.

NOTE

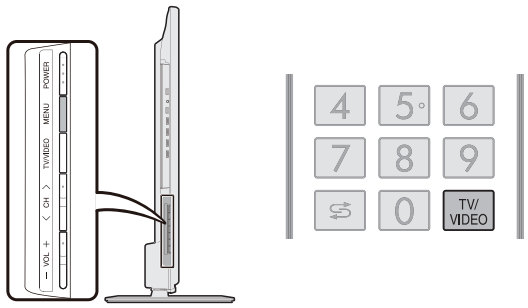
- When connecting an DVI-HDMI conversion adaptor/cable to HDMI 2 terminal, you must set to “HDMI+Analogue”. If “HDMI (Digital)” is set, there will be no sound output.

Selecting the input source

Can use for selecting the input source.

Using TV/VIDEO on the remote control unit or on the TV.

TV/VIDEO allows you to choose from the available input sources.



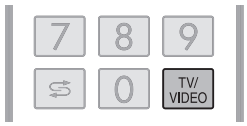
1 Press **TV/VIDEO** on the remote control unit or on the TV.

2 Press **TV/VIDEO** on the remote control unit or on the TV to select the input source.

- The image and sound from the selected source are output on the TV.
- You can also select the input source by pressing ▲/▼.

Labelling input sources

You can assign each input source a label as you prefer.



1. Press **TV/VIDEO** to select the desired input source.
2. Press **MENU** and the MENU screen displays.
3. Press ▼/◀/▶ to select “Option”.
4. Press ▲/▼ to select “Terminal setting”, and then press **ENTER**.
5. Press ▲/▼ to select “Input label”, and then press **ENTER**.
6. Select each character of the new name for the input source with using the software keyboard. (See page 30.)
7. Repeat the above until the name is fully spelt out, and then press **MENU**.
   - The name can be 6 characters or less.
   - When you want to set an input source name of less than 6 characters, select “Done”.

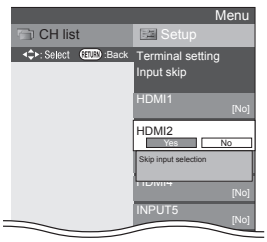
NOTE

- You cannot change labels if the input source is “A-TV”, “D-TV”, “USB media” or “Home network”.

Skipping an input

This setting allows you to skip an input on the “Input skip” menu.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “Option”.
3. Press ▲/▼ to select “Terminal setting”, and then press **ENTER**.
4. Press ▲/▼ to select “Input skip”, and then press **ENTER**.
5. Press ▲/▼ to select the Input you wish to skip.



6. Press ◀/▶ to select “Yes”.

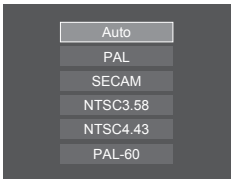
NOTE

- When you select “A-TV”, “D-TV”, the skip function works only when using the **INPUT** button on the TV.

Colour system settings

You can change the colour system to one that is compatible with the image on the screen.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “Option”.
3. Press ▲/▼ to select “Colour system”, and then press **ENTER**.
4. Press ▲/▼ to select a compatible video signal system of your equipment, and then press **ENTER**.



NOTE

- Factory preset value is “Auto”.
- If “Auto” is selected, colour system for input signal is automatically set. If an image does not display clearly, select another colour system (e.g. PAL, NTSC 4.43).
- You can choose from “Auto”, “PAL”, “SECAM” and “NTSC3.58” in the “A-TV” mode.
- “Colour system” is selectable only when inputting an composite and A-TV signal.

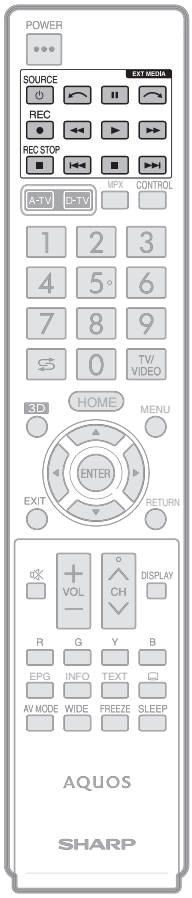
Channel selecting effect

This function sets a screen effect when choosing or changing channels.

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “Option”.
3. Press ▲/▼ to select “Screen effect” and then press **ENTER**.
4. Press ▲/▼ to select “Channel selecting effect”.
5. Press ◀/▶ to select “Yes”.

AQUOS LINK

Controlling HDMI devices using AQUOS LINK



What is AQUOS LINK?

Using the HDMI CEC (Consumer Electronics Control) protocol, with AQUOS LINK you can interactively operate compatible system devices (AV amplifier, DVD, Blu-ray Disc device) .

NOTE

- Please check the availability of AQUOS LINK-compatible AQUOS BD players and AQUOS LINK-compatible audio systems in your country.
- AQUOS LINK does not work while using USB recording functions.

What you can do with AQUOS LINK

✔ One Touch Play

While the TV is in standby mode, it automatically turns on and plays back the image from the HDMI source.

✔ Single remote control operation

The AQUOS LINK automatically recognises the connected HDMI device and you can control the TV and the devices as if using a universal remote control.

✔ Operating title list of external devices

You can also call up the external player's top menu or AQUOS BD player's title list provided that the devices support AQUOS LINK.

✔ Controlling the AQUOS LINK-compatible audio system

You can adjust the volume and select the sound mode of the AQUOS LINK-compatible audio system.

✔ Multiple control of HDMI devices

You can select which HDMI device to operate using the "Link operation" menu.

NOTE

- Point the remote control toward the TV, not to the connected HDMI device.
- Video noise may occur depending on the type of HDMI-certified cables used. Make sure to use a HDMI-certified cable.
- Up to 3 pieces of HDMI recording equipment and one AV amplifier can be connected using this system.
- These operations affect the HDMI device selected as the current input source. If the device does not operate, turn on the device and select the appropriate input source using **TV/VIDEO**.
- When you insert/remove HDMI-certified cables or change connections, turn on all connected HDMI devices before turning on the TV. Confirm that picture and audio are correctly output by selecting "HDMI 1(ARC)", "HDMI 2", "HDMI 3" or "HDMI 4" from the "INPUT SOURCE" menu.

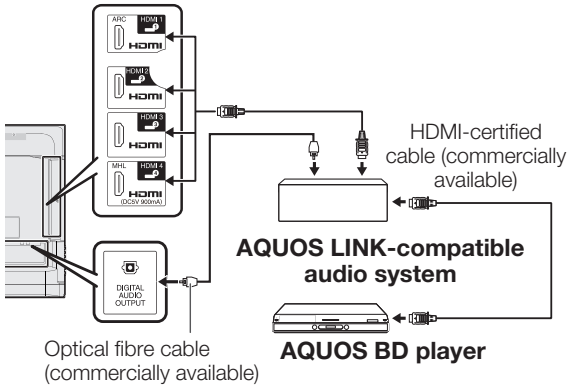
AQUOS LINK connection

First connect the AQUOS LINK-compatible audio system or an AQUOS BD player that supports the HDMI CEC protocol.

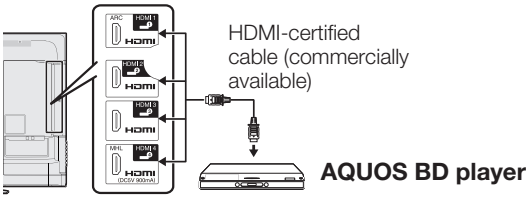
NOTE

- Refer to the operation manual of the device to be connected for further details.
- After unplugging connection cables or changing the connection pattern, first turn on the power of the TV with all relevant device's power turned on. Change the external input source by pressing **TV/VIDEO**, select the appropriate input source and verify the audio visual output.
- The cables illustrated in the following explanation are commercially available items.

Connecting an AQUOS BD player via the AQUOS LINK-compatible audio system


HDMI-certified cable (commercially available)
AQUOS LINK-compatible audio system
Optical fibre cable (commercially available)
AQUOS BD player

Connecting an AQUOS BD player only



Regarding "Select recording device"

Select the device for recording from connected devices.

NOTE

- This function enables you to select either the USB storage device for USB recording use or the HDMI device with CEC protocol.

1. Go to "Menu" → "Setup" → "View setting"→ "Select recording device".
2. Select the device for recording using the **REC** ● on the remote control unit.
   - Select "USB storage" when using the **REC** ● for USB recording.
   - Select "HDMI device" when using the **REC** ● for recording to the HDMI device.
3. Press **RETURN** to end the operation.

AQUOS LINK setup

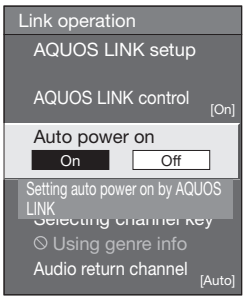
AQUOS LINK control

1. Press **MENU** and the MENU screen displays.
2. Press ◀/▶ to select "Link operation".
3. Press ▲/▼ to select "AQUOS LINK setup" and then press **ENTER**.
4. Press ▲/▼ to select "AQUOS LINK control".
5. Press ◀/▶ to select "On".

AQUOS LINK auto power on

If this is activated, the One Touch Play function is enabled. While the TV is in standby mode, it automatically turns on and plays back the image from the HDMI source.

1. Press **MENU** and the MENU screen displays.
2. Press ◀/▶ to select "Link operation".
3. Press ▲/▼ to select "AQUOS LINK setup", and then press **ENTER**.
4. Press ▲/▼ to select "Auto power on".
5. Press ◀/▶ to select "On".



6. Press **MENU** to exit.

NOTE

- The factory default for this item is "Off".

Selecting recorder

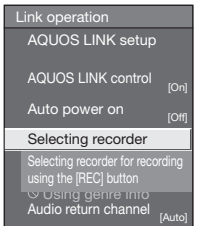
You can select a recorder for the recording from several connected recorders.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Link operation”.

3 Press ▲/▼ to select “AQUOS LINK setup”, and then press **ENTER**.

4 Press ▲/▼ to select “Selecting recorder”, and then press **ENTER**.

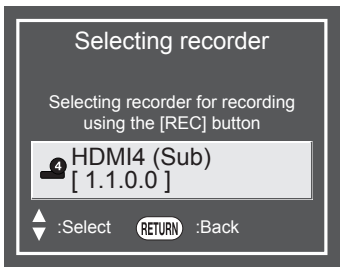


5 Select the recorder, and then press **ENTER**.

6 Press **MENU** to exit.

NOTE

- If you have connected the AQUOS LINK-compatible audio system between the TV and a CEC-compatible recorder, the input source’s indication changes from “HDMI 4” to “HDMI 4 (Sub)” as it is shown below.



Selecting channel key

This function allows you to select the channel of the connected HDMI device using the TV’s remote control.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Link operation”.

3 Press ▲/▼ to select “AQUOS LINK setup”, and then press **ENTER**.

4 Press ▲/▼ to select “Selecting channel key”, and then press **ENTER**.

5 Press ▲/▼ to select the input source of the connected HDMI device you want to control using the TV’s remote control.

6 Press ◀/▶ to select “On”.

Audio return channel (ARC)

If this function is set to “Auto”, the TV can send audio data for video content shown on the TV to a connected audio device with just one ARC-compatible cable. Using this function eliminates the need to use a separate digital or analogue audio cable.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Link operation”.

3 Press ▲/▼ to select “AQUOS LINK setup”, and then press **ENTER**.

4 Press ▲/▼ to select “Audio return channel”.

5 Press ◀/▶ to select “Auto” or “Off”.

6 Press **MENU** to exit.

Connection for using “Audio return channel”
You need to use ARC-compatible cables/devices and connect to the HDMI 1(ARC) terminal to activate this function. The connection method is the same as the **“Connecting an AQUOS BD player only”** on page 65.

NOTE

- **The ARC (Audio Return Channel) function works only when using the HDMI 1(ARC) terminal.**

Operating an AQUOS LINK device

AQUOS LINK allows you to operate the HDMI-connected device with one remote control.

Use the following procedures to start playback.

1 Press ▶ to start playback of a title.
- See this page, section **"Playback of titles using AQUOS LINK"** if you want to start playback using the list of the titles of the AQUOS BD player.

2 Press ▶▶ to fast forward.
Press ◀◀ to reverse.
Press **REC STOP** ■ to stop.
Press ❚❚ to pause.
Press **SOURCE** ⏻ to turn the HDMI-connected device on/off.

Use the following procedures to start recording.

Check the following items before recording.
- Make sure the antenna cable is connected properly.
- Check if the recording media (HDD, DVD, etc.) has enough capacity for recording a programme.
- Select the equipment for recording in Selecting Recorder.

1 After you selected recording media (HDD, DVD, etc.) in the menu, please make sure the recording menu in the ready condition.

2 Press **REC** ● to record a programme.

3 Press **REC STOP** ■ to stop recording.

Recorder power on/off

This function is for turning of the CEC-compatible recorder on/off.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select "Link operation".

3 Press ▲/▼ to select "Recorder power on/off", and then press **ENTER**.

4 Every time you press **ENTER** in "Recorder power on/off" , the CEC-compatible recorder will be turned on/off.

Playback of titles using AQUOS LINK

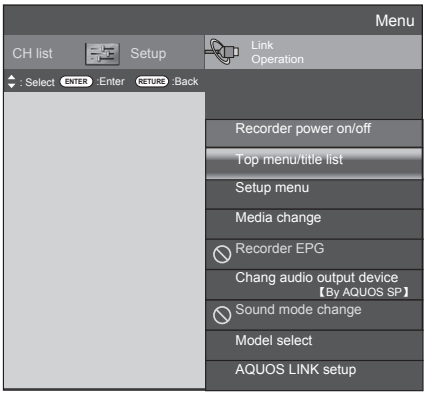
This section explains how to play back a title in the AQUOS BD player.

1 Power on the AQUOS BD player and select the appropriate external input.

2 Press **MENU** and the MENU screen displays.

3 Press ◀/▶ to select "Link operation".

4 Press ▲/▼ to select "Top menu/title list", and then press **ENTER**.



- The linked recorder now powers on and the TV automatically selects the appropriate external input source.
- The title list data from the connected AQUOS BD player displays.

5 Select the title with ▲/▼/◀/▶, and then press ▶ to start playback.

Setup menu

You can call up the menu of an HDMI CEC-compatible external device (player, recorder, decoder, etc.) using the "Setup menu" function.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select "Link operation".

3 Press ▲/▼ to select "Setup menu", and then press **ENTER**.

NOTE

- If a connected device does not have this function or the device is in a status where the menu cannot be displayed (recording, entering standby, etc.), this function may not be available.

Selecting media type for CEC-compatible recorder

If your recorder has multiple storage media, select the media type here.

1. Press **MENU** and the MENU screen displays.
2. Press ◀/▶ to select “Link operation”.
3. Press ▲/▼ to select “Media change”, and then press **ENTER**.
4. Select the desired medium, such as DVD or HDD. The media type changes every time you press **ENTER**.

Recording via the CEC-compatible recorder’s EPG (only for recorders)

You can call the CEC-compatible recorder’s EPG and preset timer recordings using the TV’s remote control.

1. Press **MENU** and the MENU screen displays.
2. Press ◀/▶ to select “Link operation”.
3. Press ▲/▼ to select “Recorder EPG”, and then press **ENTER**.
   - The external input sorce switches and the recorder’s EPG is displayed.
4. Select the programme to record.
   - You can use ▲/▼/◀/▶, **RETURN, EXIT** and the coloured buttons.

NOTE

- Refer to the operation manual of the recorder for details.

HDMI device selection

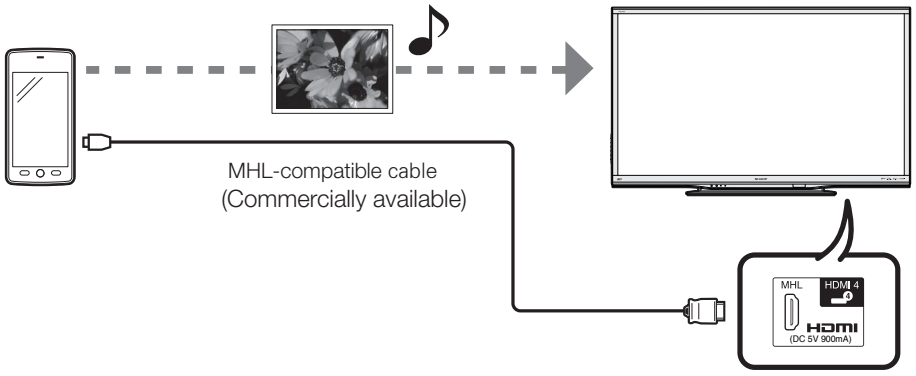
If multiple HDMI devices are connected in a daisy chain, you can specify which device to control here.

1. Press **MENU** and the MENU screen displays.
2. Press ◀/▶ to select “Link operation”.
3. Press ▲/▼ to select “Model select”, and then press **ENTER**. The HDMI device changes every time you press **ENTER**.

Using a Smartphone with the TV

This function enables you to connect the TV to a smartphone that supports Mobile High-Definition Link (MHL) using an MHL-compatible cable.
To connect the TV to your MHL-compatible smartphone, be sure to use an MHL-compatible cable (Commercially available).

- You can view pictures and video on a large screen.
- You can play back music files.



HDMI 4 / MHL terminal

NOTE

- A MHL-compatible portable device is required to use this function. Connect the device to the HDMI 4 / MHL terminal.
- Can connect via its MHL1 connection.

■ Auto Power On

When a MHL-compatible device is connected to the TV, the TV turns on automatically.

- This function operates when "AQUOS LINK control" is set to "On". (See page 65.)

■ Auto Input Selection

When a MHL-compatible device is connected while the TV is on, the input mode is selected automatically.

- This function operates when "AQUOS LINK control" is set to "On". (See page 65.)

■ Operation Using the Remote Control

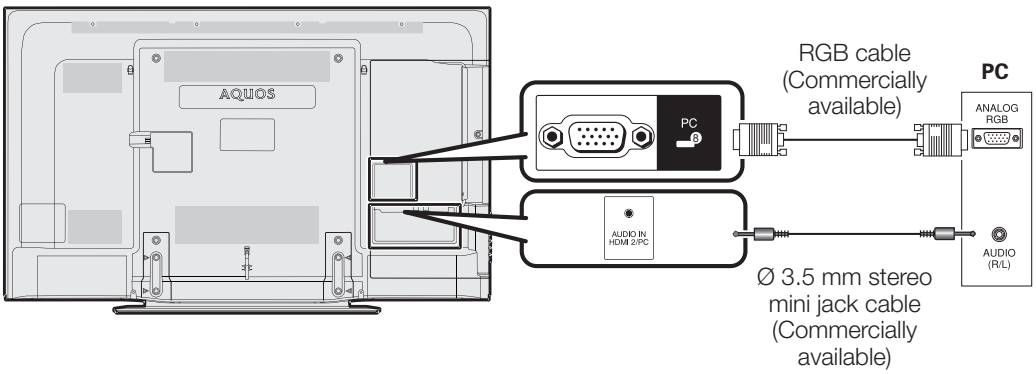
The remote control of the TV can be used to operate a portable device.

- **▲/▼◀/▶, ENTER, 0-9,** etc.
- The operations vary depending on the connected equipment and content being viewed.

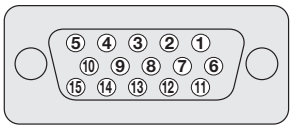
Connecting a PC

Use the PC terminals to connect a PC.

Analogue connection



Signal names for 15-pin mini D-sub connector



Pin No.	Signal name	Pin No.	Signal name	Pin No.	Signal name
①	R	⑥	GND (Ground)	⑪	Not connected
②	G	⑦	GND (Ground)	⑫	SDA
③	B	⑧	GND (Ground)	⑬	HD
④	Not connected	⑨	+5V	⑭	VD
⑤	CSYNC	⑩	GND (Ground)	⑮	SCL

NOTE

- Macintosh adaptor may be required for use for some Macintosh computers.
- Pin No. ⑤ is not used for inputting the signal.

PC compatibility chart

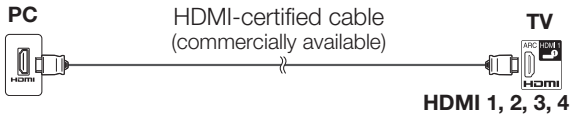
Resolution		Horizontal Frequency	Vertical Frequency	Analogue (D-Sub)	Digital (HDMI)	VESA Standard
VGA	640 × 480	31.5 kHz	60 Hz	✔	✔	✔
SVGA	800 × 600	37.9 kHz	60 Hz	✔	✔	✔
XGA	1024 × 768	48.4 kHz	60 Hz	✔	✔	✔
WXGA	1360 × 768	47.7 kHz	60 Hz	✔	✔	✔
SXGA	1280 × 1024	64.0 kHz	60 Hz	✔	✔	✔
SXGA+	1400 ×1050	65.3 kHz	60 Hz	✔	✔	✔
UXGA	1600 ×1200	75.0 kHz	60 Hz	✔	✔	✔
1080p	1920 ×1080	67.5 kHz	60 Hz	✔	✔	—

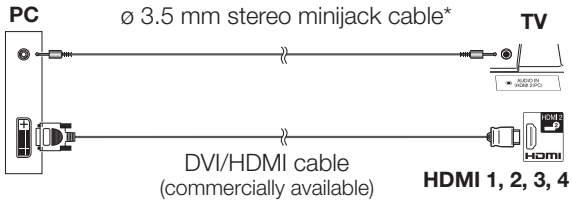
NOTE

- This TV has only limited PC compatibility, correct operation can only be guaranteed if the video card conforms exactly to the VESA 60Hz standard. Any variations from this standard will result in picture distortions.

VGA, SVGA, XGA, WXGA, SXGA, SXGA+ and UXGA are registered trademarks of International Business Machines Corporation.

HDMI connection





NOTE

- Some PC may not be displayed properly under HDMI connection.

* The analogue audio input is available only for HDMI 2/PC.

Audio select for connecting a PC

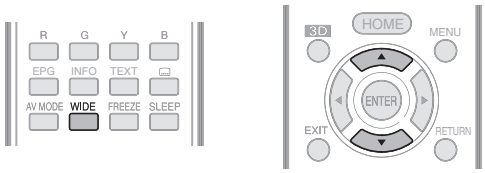
When using the PC terminal, you must select which terminal uses the AUDIO (R/L) jack for analogue audio input.
Go to "MENU" → "Setup" → "Option" → "Terminal setting" → "Audio select".

Selected item	Description
Video	When connecting devices with AV cable to the PC terminal, display images without audio.
Video+Audio	When connecting a PC to the PC terminal, and inputting analogue audio signals from the AUDIO IN terminal.

Displaying a PC image on the screen

Selecting the picture size

You can select the picture size as illustrated below.



Using Wide mode on the menu screen

1 Press **MENU** and the MENU screen displays.

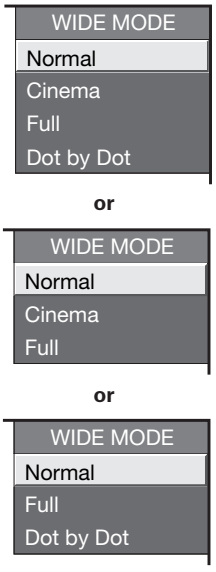
2 Press ▼/◀/▶ to select "Option".

3 Press ▲/▼ to select "Option for view", and then press **ENTER**.

4 Press ▲/▼ to select "Wide mode", and then press **ENTER**.

1 Press **WIDE**.

- The "Wide mode" menu displays.



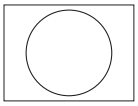
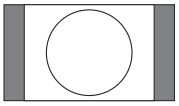
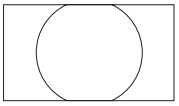
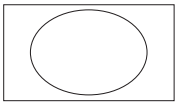
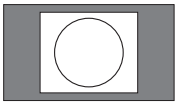
(Example)

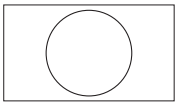
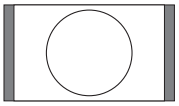
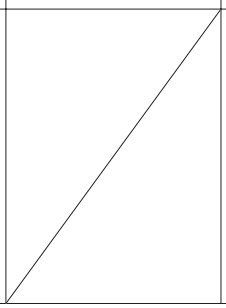
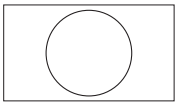
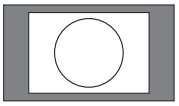
2 Press **WIDE** or ▲/▼ to select a desired item on the menu.

Connecting a PC

EXAMPLE

Picture size images.

Input Signal	Normal	Cinema	Full	Dot by Dot
 1024 × 768	 Keeps the original aspect ratio in a full screen display.	 For viewing wide screen programs. The top and bottom of the image is slightly cropped.	 An image fully fills the screen.	 Detects the resolution of the signal and displays an image with the same number of pixels on the screen.

Input Signal	Normal		Full	Dot by Dot
 1360 × 768	 Keeps the original aspect ratio in a full screen display.		 An image fully fills the screen.	 Detects the resolution of the signal and displays an image with the same number of pixels on the screen.

NOTE

- Connect the PC before making adjustments.
- Selectable picture size may vary with input signal type.
- You may not be able to change the wide mode while in 3D mode.

Adjusting the PC image automatically

This function enables the screen to be automatically adjusted to its best possible condition when the analogue terminals of the TV and PC are connected with a commercially available RGB cable, etc.

1 Press **MENU** and the MENU screen displays.

2 Press ▼/◀/▶ to select “Option”.

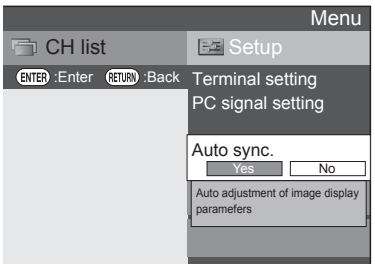
3 Press ▲/▼ to select “Terminal setting”, and then press **ENTER**.

4 Press ▲/▼ to select “PC signal setting” and then press **ENTER**.

5 Press ▲/▼ to select “Auto sync.”.

6 Press ◀/▶ to select “Yes”, and then press **ENTER**.

- Auto Sync. starts.



NOTE

- Auto Sync. is likely to succeed when an input PC image has wide vertical stripes (e.g. pattern with high contrast stripes, or cross-hatched).
  It may fail when an input PC image is solid (low contrast).
- Be sure to connect the PC to the TV and switch it on before starting Auto Sync.
- This function is available for 3D images converted from 2D images or normal 2D images.

Adjusting the PC image manually

Ordinarily you can easily adjust the picture as necessary to change image position using Auto Sync. In some cases, however, manual adjustment is needed to optimise the image.

1 Press **MENU** and the MENU screen displays.

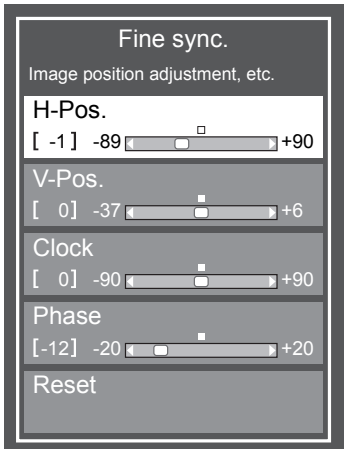
2 Press ▼/◀/▶ to select “Option”.

3 Press ▲/▼ to select “Terminal setting”, and then press **ENTER**.

4 Press ▲/▼ to select “PC signal setting” and then press **ENTER**.

5 Press ▲/▼ to select “Fine sync.”, and then press **ENTER**.

6 Press ▲/▼ to select a specific adjustment item among “H-Pos.”, “V-Pos.”, “Clock” and “Phase”.



Selected item	Description
H-Pos.	Centres the image by moving it to the left or right.
V-Pos.	Centres the image by moving it up or down.
Clock	Adjusts when the image flickers with vertical stripes.
Phase	Adjusts when characters have low contrast or when the image flickers.

7 Press ◀/▶ to adjust the item to your desired position.

NOTE

- For resetting all adjustment items to the factory preset values, press ▲/▼ to select “Reset”, and then press **ENTER**.
- Images may not be displayed properly depending on the settings and/or input signals.
- This function is available for 3D images converted from 2D images or normal 2D images.

PC control of the TV

- When a programme is set, the TV can be controlled from the PC using the RS-232C or IP. The input signal (PC/video) can be selected, the volume can be adjusted and various other adjustments and settings can be made, enabling automatic programmed playing.
- Use an RS-232C cable cross-type (commercially available), LAN cable (commercially available) or wireless LAN USB adapter for the connections.

NOTE

- This operation system should be used by a person who is accustomed to using PCs.

Communication conditions for IP

Connect to the TV with the following settings made for IP on the PC.

IP protocol	TCP/IP
Host IP address	Set the IP address on the TV menu.
Service	None (do not select Telnet or SSH).
TCP port#	Set a port number on the TV menu (Control port).

When you set your ID and password on the TV menu, you need to enter them as soon as you connect to the TV.

NOTE

- The connection will be cut off when there has been no communication for 3 minutes.

■ IP Control

1. Press **MENU** and the MENU screen displays.
2. Press ▼/◀/▶ to select “View setting”.
3. Press ▲/▼ to select “Network setup”, and then press **ENTER**.
4. Press ▲/▼ to select “IP Control/Remote app”, and then press **ENTER**.

Select Device Names

Set the name of the TV displayed on external devices.

- Use the software keyboard to set the name. See page 30 for details on the software keyboard.

Detailed Settings

Make the detailed settings (Login ID, password, etc.). Follow the on-screen instructions to configure the settings.

Communication conditions for RS-232C

Set the RS-232C communications settings on the PC to match the communications conditions of the TV. The communications settings of the TV are as follows:

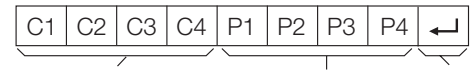
Baud rate:	9,600 bps
Data length:	8 bits
Parity bit:	None
Stop bit:	1 bit
Flow control:	None

Communication procedure

Send the control commands from the PC via the RS-232C connector. The TV operates according to the received command and sends a response message to the PC.
Do not send multiple commands at the same time. Wait until the PC receives the OK response before sending the next command.

Command format

Eight ASCII codes + CR



Command 4-digits: Command. The text of four characters.
Parameter 4-digits: Parameter 0 - 9, space, ?

Parameter

Input the parameter values, aligning left, and fill with space(s) for the remainder. (Be sure that four values are input for the parameter.)
When the input parameter is not correct, “ERR” returns. (Refer to “Response code format”.)

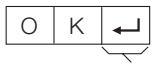
0			
0	0	0	9
–	3	0	
1	0	0	
0	0	5	5

When “?” is input for some commands, the present setting value responds.

?			
?	?	?	?

Response code format

Normal response



Problem response (communication error or incorrect command)

RS-232C Commands List

RS-232C Commands

- Commands not indicated here are not guaranteed to operate.

CONTROL ITEM	COMMAND				PARAMETER				CONTROL CONTENTS
POWER SETTING	P	O	W	R	0	_	_	_	POWER OFF (STANDBY)
INPUT SELECTION	I	T	G	D	_	_	_	_	INPUT SWITCHING (TOGGLE)
	I	T	V	D	_	_	_	_	TV (CHANNEL FIXED)
	I	D	T	V	_	_	_	_	D-TV (CHANNEL FIXED)
	I	A	V	D	*	_	_	_	HDMI1–4 (1–4), INPUT5–7 (5–7), PC (8)
CHANNEL	D	C	C	H	*	*	_	_	TV DIRECT CHANNEL (1–99)
	C	H	U	P	_	_	_	_	CHANNEL UP
	C	H	D	W	_	_	_	_	CHANNEL DOWN
	D	T	V	D	*	*	*	_	D-TV DIRECT CHANNEL (1-999)
	D	T	U	P	_	_	_	_	D-TV CHANNEL UP
	D	T	D	W	_	_	_	_	D-TV CHANNEL DOWN
AV MODE SELECTION	A	V	M	D	0	_	_	_	TOGGLE
	A	V	M	D	1	_	_	_	STANDARD
	A	V	M	D	2	_	_	_	MOVIE
	A	V	M	D	3	_	_	_	GAME(Standard)
	A	V	M	D	4	_	_	_	USER
	A	V	M	D	5	_	_	_	DYNAMIC (Fixed)
	A	V	M	D	6	_	_	_	DYNAMIC
	A	V	M	D	7	_	_	_	PC
	A	V	M	D	1	0	0	_	AUTO
	A	V	M	D	1	4	_	_	STANDARD (3D)**
	A	V	M	D	1	5	_	_	MOVIE (3D)**
	A	V	M	D	1	6	_	_	GAME (3D)**
VOLUME	V	O	L	M	*	*	*	_	VOLUME (0–100)
POSITION	H	P	O	S	*	*	*	_	H-POSITION (AV) (–nn ~ nn)
	H	P	O	S	*	*	*	_	H-POSITION (PC) (–nn ~ nn)
	V	P	O	S	*	*	*	_	V-POSITION (AV) (–nn ~ nn)
	V	P	O	S	*	*	*	_	V-POSITION (PC) (–nn ~ nn)
	C	L	C	K	*	*	*	_	CLOCK (-90 – 90)
	P	H	S	E	*	*	*	_	PHASE (-20 – 20)
WIDE MODE	W	I	D	E	0	_	_	_	TOGGLE (AV)
	W	I	D	E	1	_	_	_	NORMAL (AV)
	W	I	D	E	2	_	_	_	ZOOM 14:9 (AV)
	W	I	D	E	3	_	_	_	PANORAMA (AV)
	W	I	D	E	4	_	_	_	FULL (AV)
	W	I	D	E	5	_	_	_	CINEMA 16:9 (AV)
	W	I	D	E	6	_	_	_	CINEMA 14:9 (AV)
	W	I	D	E	7	_	_	_	NORMAL (PC)

CONTROL ITEM	COMMAND				PARAMETER				CONTROL CONTENTS
WIDE MODE	W	I	D	E	8	_	_	_	CINEMA (PC)
	W	I	D	E	9	_	_	_	FULL (PC)
	W	I	D	E	1	0	_	_	DOT BY DOT (AV/PC)
	W	I	D	E	1	1	_	_	UNDERSCAN (HDMI)
	W	I	D	E	1	2	_	_	AUTO (During playback USB/ Home network video only)
	W	I	D	E	1	3	_	_	ORIGINAL (During playback USB/Home network video only)
MUTE	M	U	T	E	0	_	_	_	TOGGLE
	M	U	T	E	1	_	_	_	MUTE ON
	M	U	T	E	2	_	_	_	MUTE OFF
SURROUND	A	C	S	U	0	_	_	_	SURROUND TOGGLE
	A	C	S	U	1	_	_	_	SURROUND ON
	A	C	S	U	2	_	_	_	SURROUND OFF
	A	C	S	U	4	_	_	_	SURROUND 3D HALL
	A	C	S	U	5	_	_	_	SURROUND 3D MOVIE
	A	C	S	U	6	_	_	_	SURROUND 3D STANDARD
	A	C	S	U	7	_	_	_	SURROUND 3D STADIUM
AUDIO CHANGE	A	C	H	A	_	_	_	_	TOGGLE
SLEEP TIMER	O	F	T	M	0	_	_	_	OFF
	O	F	T	M	1	_	_	_	SLEEP TIMER 30 MIN
	O	F	T	M	2	_	_	_	SLEEP TIMER 1 HOUR
	O	F	T	M	3	_	_	_	SLEEP TIMER 1 HOUR 30 MIN
	O	F	T	M	4	_	_	_	SLEEP TIMER 2 HOUR
	O	F	T	M	5	_	_	_	SLEEP TIMER 2 HOUR 30 MIN
3D	T	D	C	H	0	_	_	_	3D OFF
	T	D	C	H	1	_	_	_	2D → 3D
	T	D	C	H	2	_	_	_	SIDE BY SIDE
	T	D	C	H	3	_	_	_	TOP AND BOTTOM
	T	D	C	H	4	_	_	_	3D → 2D (SIDE BY SIDE)
	T	D	C	H	5	_	_	_	3D → 2D (TOP AND BOTTOM)
	T	D	C	H	6	_	_	_	3D AUTO
	T	D	C	H	7	_	_	_	3D → 2D**

NOTE

- If an underbar (_) appears in the parameter column, enter a space.
- If an asterisk (*) appears, enter a value in the range indicated in brackets under CONTROL CONTENTS.

** These commands are available only during 3D mode.

Network function

Connecting to the Network

To enjoy internet services, you need to connect the TV to a router with a high speed connection to the internet. You can also connect the TV to your Home network server through a router or access point. The TV connection to the router can either be wired or wireless.

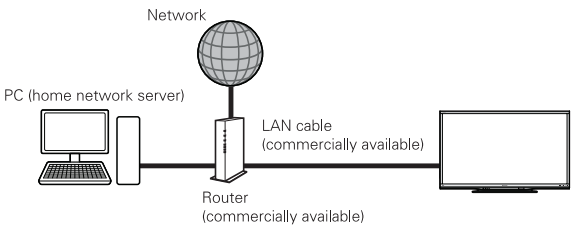
NOTE

- If you choose a wired connection to the router, you need a LAN cable (commercially available).
- If you do not have a broadband internet connection, consult the store where you purchased your TV or ask your internet service provider or telephone company.
- A wired and wireless connection cannot be used at the same time. Use only one of the connection types.
- A stable connection speed is required to play back streaming content, otherwise you may not be able to watch normally.
- As there are lot of formats in the internet, some formats may not be supported by this TV unit.

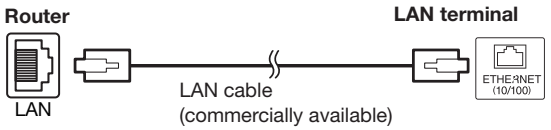
Wired installation

Switch on the router (commercially available). Refer to the router's operation manual for switching on.
Connect the LAN terminal on the TV to the router (commercially available) with a LAN cable (commercially available).

Wired connection overview



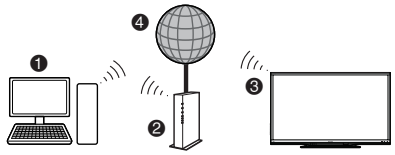
How to connect



Wireless installation

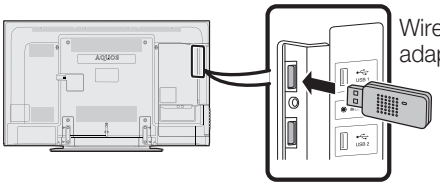
Switch on your router before starting the network installation.
Connect the wireless LAN USB adapter (Supplied) to the USB 1/USB 2/USB 3 (WIRELESS LAN) port on the rear of the TV.

Wireless connection overview



❶ PC (home network server)
❷ Wireless LAN router/access point
❸ Wireless LAN USB adapter (Supplied)
❹ Network

How to connect



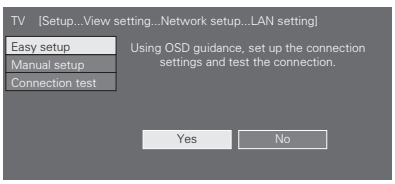
- After connected, please refer to "LAN setting" for setting wireless connection (see this page and next page)

NOTE

- This TV has received the following certifications when connected in an environment using the supplied SHARP wireless LAN USB adapter.
  – Wi-Fi CERTIFIED™ (certification program from the Wi-Fi Alliance®)
  – Wi-Fi Protected Setup™ (certification program from the Wi-Fi Alliance®)
- A wireless LAN connection and performance cannot be guaranteed for all residential environments. In the following cases, the wireless LAN signal may be poor or drop, or the connection speed may become slower.
  – When used in buildings made with concrete, reinforced steel, or metal.
  – When placed near objects that obstruct the signal
  – When used with other wireless devices that emit the same frequency.
  – When used in the vicinity of microwave ovens and other devices that emit a magnetic field, electrostatic charge, or electromagnetic interference.
- Make sure the firewalls in your network allows access to the TV wireless connection.
- Operations cannot be guaranteed when used with access points that do not have Wi-Fi® certification.
- A wireless LAN access point is required to connect the TV to the Internet using a wireless LAN. See the operation manual of your access point for setup.
- A stable connection speed is required to play back streaming content. Use a wired connection if the wireless LAN speed is unstable.
- As there are lot of formats in the internet, some formats may not be supported by this TV unit.
- Before transferring to a third party or disposal, be sure to initialise the wireless LAN settings.
- When using the SHARP wireless LAN USB adapter (Supplied), try to provide as much free space around the device for best performance.
- Use the supplied USB adapter for wireless connection. Operations cannot be guaranteed if you use LAN adapter.

LAN setting

Go to "Menu"→"Setup"→"View setting"→"Network setup"→"LAN setting".



Easy setup

Only the WPS mode is available for wireless connection setup. “Manual setup” is possible for other wireless connections.

1 Go to "Menu"→"Setup"→"View setting" → "Network setup"→"LAN setting".

2 Press ▲/▼ to select “Easy setup”, and then select "Yes", press **ENTER**.

3 Select "Wired" or "Wireless", and then press **ENTER**.

- Follow the on-screen instructions to complete the network setup.
- A connection test is performed after the setup is complete.

NOTE

- For instructions on how to check whether your router supports the WPS function and how to locate the WPS button, see the main body of your router or refer to its operation manual.

Manual setup

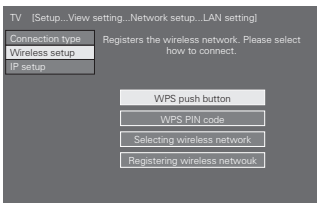
- You can select the connection type (wired/wireless), choose the wireless setup mode, and set the IP address.
- Follow the on-screen instructions to complete the network setup.

Wireless installation

1 Go to "Menu"→"Setup"→"View setting" → "Network setup"→"LAN setting"→ "Manual setup"→"Yes".
"Connection type"→"Wireless"→"OK".

2 Go to “Wireless setup”→"Change", and then press **ENTER**.

3 Press ▲/▼ to select “WPS push button”, and then press **ENTER**.



- If your router/access point does not support WPS (Wi-Fi Protected Setup), select “Selecting wireless network” and follow the on-screen instructions and the operation manual of the router/access point.
- To establish the connection manually, select “Registering Wireless network”. Follow the on-screen instructions and the operation manual of the router/access point.
- To establish the connection manually, select “WPS PIN code”. Follow the on-screen instructions and the operation manual of the router/access point.

4 Select “Next” to proceed.

5 Press the WPS button on the router/access point. When you press the WPS button, a progress bar will appear on the display. Wait until the connection is established.

6 Select “OK” when the connection details are displayed.

- If you have failed to connect to the internet in the above operation, an error message will appear.

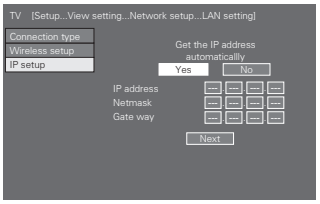
Wired installation

1 Go to "Menu"→"Setup"→"View setting" →"Network setup"→"LAN setting".

2 Press ▲/▼ to select “Manual setup”, and then select "Yes", press **ENTER**.

- Go to "Connection type"→"Wired"→"OK".

3 Press ▲/▼ to select “IP setup”, press **ENTER**, select "change" and then press **ENTER.**



- Set “Get the IP address automatically” and “Get the DNS address automatically” to “Yes”, to finish the network setup.
- The wired network is now established automatically. If you want to manually change the settings, go to “Menu” → “Setup” → “View setting” → “Network setup” → “LAN setting” → “IP setup” and follow the on-screen instructions and the operation manual of the router.

4 Select “OK” , and then select “Finish”.

- If you have failed to connect to the Internet in the above operation, an error message will appear.

NOTE

- To connect your TV to the internet, you must have a broadband internet connection.
- If your access point is set to a stealth mode (that prevents detection by other devices), you may not be able to establish a connection. In this case, disable the stealth mode on the access point.
- If you want to change the IP settings manually, go to “Menu” → “Setup” → “View setting” → “Network setup” → “IP setup” and follow the on-screen instructions and the operation manual of the router.
- As there are lot of formats in the internet, some formats may not be supported by this TV unit.

Connection test

- You can test the network connection status.

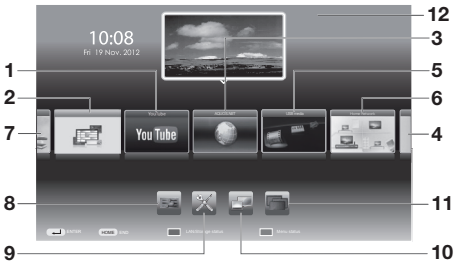
NOTE

- Successfully passing the connection test does not guarantee that you can connect to all third-party services.

Specifications (Wireless LAN USB adapter)

Standard	IEEE 802.11a/b/g/n
Frequency band	2400-2483.5 MHz 5725-5850 MHz
Security	Static WEP (64/128 bit, key index 1 only) WPA-PSK (TKIP) WPA2-PSK (AES)
Modulation	DBPSK@1Mbps DQPSK@2Mbps CCK@5.5/11Mbps BPSK@6/9 Mbps QPSK@12/18Mbps 16-QAM@24Mbps 64-QAM@48/54 Mbps and above, Rx up to 300 Mbps

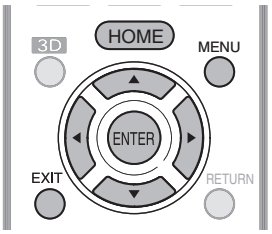
HOME UI



You can easily launch to enjoy Internet connection and Home network function and to perform settings for the TV from this “HOME” screen.

- Some of these service requires internet connection.
- SHARP is not responsible for the service of third-party.
- Parental consent is necessary for children to use the internet service.
- For the selection items in “HOME” screen, please see page 79-80.

Basic operation



Display the HOME screen

Press **HOME** and the “HOME” screen displays.

- You can also display the "HOME" screen from "Menu" →"Set up"→"Option"→"Option for view"→"Home UI".

Select an item

Press ▲/▼/◀/▶ to select the desired service or menu, and then press **ENTER**.
The operation will exit the “HOME” screen if you press **EXIT** before it is completed.

* When displays, you are not connected to USB devices.If is displayed, check your USB device’s connection.
* When displays, you cannot connect to TV’s network. If is displayed, check your TV’s network settings and connection.

Selecting in the HOME

1 Youtube
You can enjoy Youtube on your AQUOS TV.

2 EPG
Quick shortcut for EPG.
For EPG, please see page 50.

3 AQUOS.NET
By connecting the TV to the Internet, you can enjoy a variety of broadband content.

Example : The image shown below, which is only for explanation, it is subjected to change.

Twin Picture

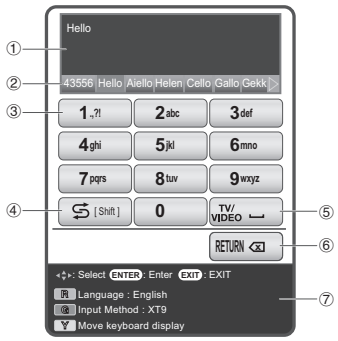
- Each time you press WIDE when a browser screen is shown , the display pattern toggles between a website-only screen and a TV+Web screen.

NOTE

- Additional applications will be available in the future.
- The delivery speed of applications varies depending on the network speed. Check the web site of the provider for details on application setup and other information.
- As there are lot of formats in the internet, some formats may not be supported by this TV unit.
- When using twin picture, watching a video via browser screen is not available.

Selected item	Description
	Go back to the previous page.
	Go to the next page.
	Refresh the page. Interrupt a page while it is loading.
	Switches between virtual mouse and spatial navigation modes. Switching modes also switches the display. Depending on the page displayed, switching this function may make it easier to use the browser.
	Opens a search window below the toolbar. You can use this to search for a word within the displayed page.
	Displays the Home Page. You can set the page displayed as your home page when the browser starts up.
	Add to bookmarks list. Displays the bookmarks list. Please press the **RETURN** key to finish.
	Displays your browsing history.
	Configures browser settings such as your home page and browsing security.
	Zooms the display in or out.
1	Restrictions apply to window display.

Press ▲/▼/◀/▶ to select the “address bar”, and then press **ENTER**.
The software keyboard will pop up when you press **ENTER** again.
Use the software keyboard to input the “URL”, and then press **ENTER**.



① **Input field**
The text you enter is displayed as you type it in.

② **Input candidate**
While you are entering text, likely input conversion candidates are displayed based on what you typed in.
• You can also enter text by pressing ▲/▼/◀/▶ on the remote control unit.

③ **0 – 9 keys**
Input characters by using these buttons.

④ **Shift key**
Changes characters to capital/lower case by pressing on the remote control unit.

⑤ **(space)**
You can input a space by pressing **TV/VIDEO** on the remote control unit.

⑥ **Back space key**
Erases the character string by pressing **RETURN** on the remote control unit.

⑦ **Key guidance**
• Select the coloured item on the screen.
R : Language selection
G : Changes character set into the alphabet, numbers, symbol, etc.
Y : Changes the display position of the software keyboard.

4 Record list (See pages 83.)

5 USB Media (See pages 86 to 91.)

6 Home network (See pages 91 to 94.)

7 Input change (See pages 62.)

8 TV Menu
Call up the OSD (On-screen Display) to perform settings for the TV. The OSD (On-screen Display) for the settings is called “TV Menu”. The “TV Menu” enables various settings and adjustments.(See page 25.)

NOTE
You can call up “TV Menu” screen by press MENU.

9 Network setup (See pages 76 to 77.)

10 IP Control (See page 74.)

11 CH List
You can check the CH list and view detailed information.

12 Status guide
Current "LAN/Starage status" or "Menu status" can be shown. Switching the display can be done by using the colour buttons.

Clear browser setting

You can clear browser setting, which includes cookies, bookmarks and caches.Go to “Menu” → “Setup” → “View setting” → “Clear browser setting”.

NOTE
• Password input is required when executing “Clear browser setting” if Password is set.

CAUTION
• If you exercise this operation, browser setting will be completely initialized. If there is important information take notes before executing.

About links

• Web pages on the Internet often include “links” that allow you to jump to other web pages (or sites).
• “Links” can take various forms, including words or images, but they always work in the same way letting you jump to the link destination when you select them.
• You can jump from a “link” to the corresponding link destination.

CAUTION
• If the power is cut due to a power failure or the TV being unplugged while you are using the Internet, information such as bookmarks or cookies may not be saved correctly.

NOTE
To users who access the Internet from a PC
• When you access the Internet from this TV, the procedures may not be the same as regular browser-based access on a PC.
• You cannot download files nor install programs.
• Video and audio* may not be played, and text or images may not be displayed correctly.
• Depending on the data format, some formats may not be supported.
• As there are lot of formats in the internet, some formats may not be supported by this TV unit.

Other useful features

You can connect the TV to a USB memory device, USB hard disk drive (HDD) or home network server to enjoy viewing pictures, listening to music, and watching videos.The USB memory device can also be used for recording.

NOTE

- Depending on the USB memory device/USB hard disk drive (HDD)/home network server, the TV may not be able to recognise the recorded data.
- It may take time to read the recorded data if the USB memory device/USB hard disk drive (HDD)/home network server contains many files or folders.
- Use only alphanumeric characters for naming files.
- File names over 80 characters (may vary depending on character set) may not be displayed.
- External subtitles for some video files may not be supported.
- Partitioned USB hard disk drives are not supported. Therefore, use only USB hard disk drives that are not partitioned.
- Only compatible file formats are displayed.

USB recording

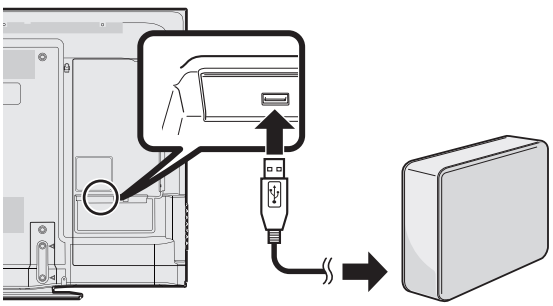
You can enjoy D-TV recording or playback by connecting a commercially available USB HDD to the TV.

- USB recording does not work for A-TV, external inputs, data broadcasts, radio broadcasts or network applications.

Connecting a USB HDD

Connect a commercially available USB HDD to the USB port of the TV.

- USB storage device: USB HDD
- USB HDD is recommended to connect to USB 3(HDD) terminal.
- Be sure to read the operation manual for the USB HDD.
- At least USB HDDs with memory between 100GB and 2TB and under are required for USB recording to register.
- Refer to Disconnect the USB HDD when removing the USB HDD (do not remove the USB HDD during USB recording operation).



NOTE

- USB recording may take a while to start after the TV is turned on.
- This function may not work properly for some USB HDDs.
- Do not connect and disconnect a USB HDD from the TV repeatedly.

USB HDD registration

It is necessary to first perform USB HDD registration for USB HDDs used for USB recording.
Directly connect only one USB HDD to the USB port while registering the USB HDD (when two or more USB HDDs are connected, USB HDD registration is not available).

- The screen prompt pops up.

> When the USB HDD is connected to the TV
> Register the USB HDD. Follow the on-screen instructions to register the USB HDD.

NOTE

- Only one USB HDD for USB recording can be registered on the TV. Two or more USB HDDs for USB recording cannot be used at the same time.
- When a USB HDD is registered, formatting may be performed. In that case, all data will be deleted.

Disconnecting the USB HDD

When you disconnect the USB HDD, be sure to the following steps.
Go to “TV Menu”> “Setup”> “View setting”> “USB REC setting”> “Device removal”.

NOTE

- This menu item cannot be selected when a USB HDD for USB recording is not registered.
- The USB HDD registration for USB recording is cancelled in the following cases:
  - When the USB HDD is removed.
  - When another USB HDD is registered for USB recording; only one USB HDD can be registered for USB recording.

How to operate USB recording

You can enjoy D-TV recording or playback by connecting a commercially available USB HDD to the TV.

CAUTION

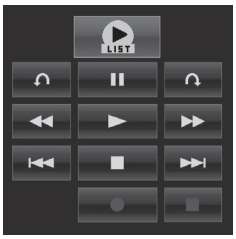
- Do not unplug the AC cord or turn off the MAIN POWER switch during USB recording timer setting or USB recording.
- When the AC cord is unplugged and the MAIN POWER switch is turned off:
  – The USB recording timer setting is cancelled.
- USB recording may stop automatically when signal reception is poor.
- Only this TV can playback the programme recorded on the USB HDD connected to this TV. The programmes cannot playback on other TV or PC.

SHARP Corporation bears no responsibility regarding compensation for content when recording does not take place, loss of recorded data or other direct or indirect damages related to these matters. Please be forewarned.

Buttons for USB recording operation

Remote control unit

Control panel



Buttons	Description
LIST	Displays the list of the programmes recorded by USB recording.
REC ●	Start recording the programme you are watching. • You cannot playback the recorded programme until several seconds after pressing **REC** ● to start recording.
REC STOP ■	Stop recording.
▶	Playback the recorded programme.
■	Stop the programme in playback and go back to the real time broadcast (live).
❚❚	Pause the programme in playback (USB recording continues). • This function is released in 15 minutes.
◀◀	Reverse (each time you press this button, the reverse speed changes in three levels).
▶▶	Fast forward (each time you press this button, the fast forward speed changes in three levels).
⏮	Jump backward to the previous chapter point*.
⏭	Jump forward to the next chapter point*.
↶	Playback will resume after jumping backward by the time interval you set in “Jump time setting” (Page 84).
↷	Playback will resume after jumping forward by the time interval you set in “Jump time setting” (Page 84).

* Chapter points are fixed at 10 minute increments.

NOTE

- Refer to **Regarding “Select recording device”** (Page 65) when the buttons for USB recording do not work.
- Instead of pressing buttons on the remote control, most of the operations shown to the left are also available on the screen with the control panel. You can call up this control panel by pressing **CONTROL** on the remote control or select “Control (USB REC)” from “Menu” → “Setup” → “Option” → “Option for view”→ “Control (USB-REC)”.
- USB recording stops if no operation detected for three hours.
- When recording operations are not stopped manually, recording will automatically stop after six hours.
- To release USB recording, press **REC STOP** ■, change the D-TV channel or change “INPUT”.
- Some functions do not work during USB recording.
- USB recording does not start automatically, but starts only when **REC** ● is pressed or when a USB recording timer setting is started.
- The PIN is required when you use the buttons such as ◀◀, ▶▶, ⏮, ⏭, ↶, ↷ if you set the PIN and any options for “Parental rating” except “None” are selected.
- Do not disconnect the USB HDD used for USB recording during USB recording operation.

USB recording

You can record the programme you are watching to the registered USB HDD.

■ Starting USB recording

Press **REC ●**.
• The TV starts USB recording.

NOTE

- You can also operate from the control panel by pressing **CONTROL**.
- You cannot switch the channel or the input source during USB recording.
- During USB recording, the TV cannot display photos or play music from the internet, Home network, or USB storage.
- You cannot record programmes that have a copy control signal that prohibits recording (They can only be watched on the TV).

■ Completing USB recording

1 Press **REC STOP ■**.
• The screen prompt pops up.
2 Press ◀/▶ to select “Yes”, and then press **OK**.
• USB recording has completed.

NOTE

- You can also operate from the control panel by pressing **CONTROL**.

USB recording timer setting

You can set the USB recording timer setting for programmes you want to record.

NOTE

- To prevent the first part of the programme from being cut, start recording the programme a few seconds earlier than time set to start recording.
- When recording/viewing timer settings are set continuously for multiple programmes, schedule the recording of the previous programme to end earlier than the end of the programme itself. Recording/viewing timer setting of the next programme will start after that.
- A message will be displayed when the scheduled time overlaps with an existing schedule. Make changes in accordance with the on-screen instructions.
- It is not possible to newly schedule a recording that overlaps with a timer setting that is currently running (recording). When urgent setting of a schedule is desired, stop recording before scheduling.
- A combined total of 16 timer settings (“Watch” and “Record”) can be set.

■ EPG timer setup

You can select the programme you want to record and set the timer setting with EPG (Pages 53).

■ Manual timer setting

“Manual timer setting” enables you to set date, recording start/stop time and channel.

1 Press **EPG**.
2 Press **B** to display the timer list.
3 Press **B** again to display the “Manual timer setting” screen.
4 Set date, recording start/stop time and channel.
5 Press ◀/▶ to select “Record”, and then press **OK**.
• A confirmation screen will be displayed for the timer setting.
6 Press ◀/▶ to select “Yes”, and then press **OK**.

■ Manual clock setting

When the TV cannot receive the time via digital broadcast, perform “Manual timer setting” after setting the clock.
Go to “TV Menu” > “View setting” > “Individual setting” > “Clock setup” > “Time adjustment” .

NOTE

- You cannot set the manual clock setting during USB recording.

Timer list

A list of programmes scheduled for recording can be displayed.

1 Press **EPG**.
2 Press **B** to display the timer list.

USB recording playback

To playback the recorded programmes, open the USB recording list and select the desired programme.

1 Go to “HOME” > “Record list”.
2 Press “OK” button.
• Press ■ to return the scene that is broadcasting.

NOTE

- You may not playback recorded programmes when the programme provider restricts or completely prevents recording or later watching of an encoded programme.

USB recording playback (continued)

Playback recorded scenes of the programme being recorded.

Press ▶ during recording.

- Press **REC STOP** ■ to return the scene that is broadcasting.

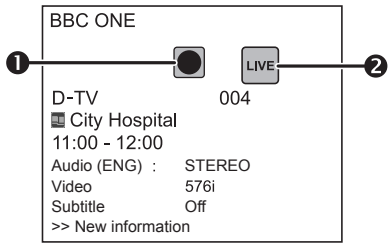
NOTE

- You can also operate from the control panel by pressing **CONTROL**.
- USB recording playback may take a while to start.
- USB recording playback will stop and the TV will return to normal broadcasting when a programme is fast-forwarded to a scene that is near to the scene currently being broadcast. The timing at which it returns depends on the speed of fast-forwarding.

■ Display information regarding USB recording

● Channel display

Channel information displays by pressing **DISPLAY** on the remote control unit.

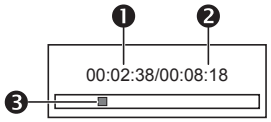


❶ The recording icon shows up when **REC** ● is pressed and the TV is recording the programme.

❷ The status icon shows up depending on what is shown on the screen.

● Counter

The counter displays on the screen with the control panel.



❶ Current playback time.

- Hidden during recording.

❷ Total playback time of the content

❸ The yellow bar shows how much time has progressed.

- Hidden during recording or playback-during-recording.

NOTE

- You can also call up the information above by pressing **CONTROL** on the remote control unit or select “Control (USB REC)” from “TV Menu” > “Setup” > “Option” > “Option for view” .

View setting

■ Auto input selection

You can choose whether or not to switch the input source automatically when receiving an AQUOS LINK compatible signal on the TV during USB recording operations.

Go to “TV Menu” → “Setup” → “View setting” → “USB REC setting” → “Auto input selection”.

Selected item	Description
Enable	Release USB recording when receiving an AQUOS LINK compatible signal. Switch input source automatically.
Disable	USB recording continues to work. The TV does not switch input source automatically even when receiving an AQUOS LINK compatible signal.

■ Jump time setting

You can set the time interval for playback to resume after jumping backwards/forward.

Go to “TV Menu” → “Setup” → “View setting” →”USB REC setting” → “Jump time setting”.

- A time interval from 10 sec. to 99 min. 50 sec can be selected.

NOTE

- You can use the time interval you set using the ↶ or ↷ buttons.

■ Device registration

You need to register the USB HDD for the USB recording.

Go to “TV Menu” → “Setup” → “View setting” →”USB REC setting” → “Device registration”.

- Refer to **USB HDD registration** (Page 81).

NOTE

- Only one USB HDD can be registered for USB-recording. Remove all USB HDDs except the one used for USB recording.
- At least USB HDDs with memory between 100GB and 2TB and under are required for USB recording to register.
- Some USB HDDs, such as ones which have multiple drives, etc., cannot be used for USB recording.

■ Device format

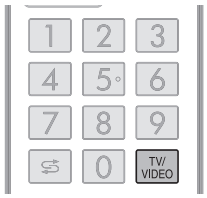
You can format all data on the USB HDD.

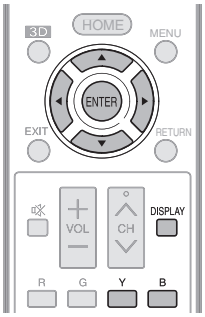
Go to “TV Menu” → “Setup” → “View setting” →”USB REC setting” → “Device format”.

NOTE

- Once formatting has been completed, data cannot be restored.

Select the files to play back





- To play back data on a USB memory device, insert the USB memory device on the TV. Select “USB media” from “INPUT”.
- Use the following procedure to switch back to USB mode after switching from USB mode to another mode.
- The corresponding file format is different between “USB media” and “Home network”.

1 Select “USB media” or “Home network” from INPUT list screen.

2 Press **B**.

■ USB memory device

① Press ▲/▼ to select “Select USB drive”, and then press **ENTER**.
- The available selections are “Select USB drive” and “Folder display setting”.

② Press ▲/▼/◀/► to select the USB device where you want to find your files, and then press **ENTER**.
- You can select from “All” or “Folder” for the type of folder directory in “Folder display setting”.

Example

- If the TV is turned off and then on again, the number assigned to the USB drive may change.

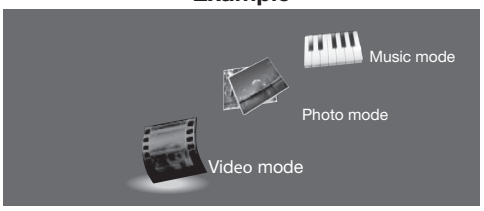
■ Home network

Press ▲/▼ to select the Home network server where you want to find your files, and then press **ENTER**.
- Press **Y** to search for servers.

Example

3 Press ◀/► to select “Photo mode”, “Music mode” or “Video mode”, and then press **ENTER**.

Example



4 Press ◀/► to select the desired folder, and then press **ENTER**.

NOTE

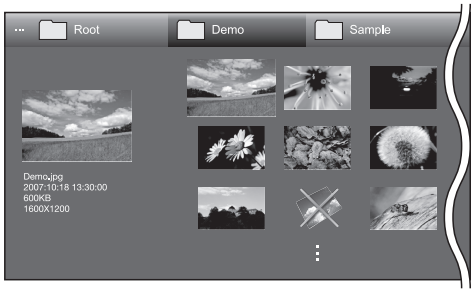
- You cannot switch the input mode if a USB memory device is not connected.
- You do not need to select the drive/server in step 2 when there is only one drive in the connected USB memory device or there is only one home network server connected to the TV.
- “Wide mode” is fixed during “Photo mode”. During “Video mode”, you can select “Auto” ,“Original” or “Full".
- You cannot enter these modes when there is no server connected to the TV in home network mode.
- The key guide display disappears automatically after a few seconds. To display the key guide display again, press **DISPLAY**.

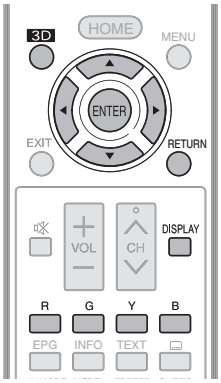
Playing back files on a USB memory device

Photo mode

Viewing thumbnails

Example





Buttons for thumbnail operations

Buttons	Description
ENTER	When selecting a folder icon: Enter this directory. When selecting a photo thumbnail: Enlarge the photo.
▲/▼/◄/► (Cursor)	Select a desired item.
RETURN	Return to the previous operation.
R button	Select/deselect items (✔ mark appears on the selected items).
G button	All*: Select Background music (BGM) for the slide show. Folder*: Move to the parent folder.
Y button	Start the slide show.
B button	Display “USB media menu”. • 3D display • Select slide show interval • Select slide show Background music (BGM) • Set all slide show image • Reset all slide show image • Sort • USB device removal

* The mode selected in “Folder display setting” on page 85.

NOTE

- Only compatible file formats are displayed.
- The 3D icon appears on the thumbnails of 3D images. If you do not switch to 3D mode for the 3D images, they will be displayed in 2D.
- You can see the file name, shooting date, file size and pixel size of the selected photo in the lower-left corner of the screen (shooting date is only available in the EXIF file format).

Viewing individual photos

The photo selected on the thumbnail selection screen is displayed.

Buttons for individual display operation

Buttons	Description
◄/► (Cursor)	Go to the previous/next photo in the same directory.
RETURN	Return to the thumbnail selection screen.
3D	Switch between 2D and 3D modes.
R button	Rotate the photo by 90 degrees to the left.
G button	Rotate the photo by 90 degrees to the right.
B button	Display “USB media menu”. • USB device removal
DISPLAY	Reveal/hide the guide display.

NOTE

- Rotating photos only applies to the temporarily selected item and this setting is not saved.

Slide show

The photos displayed on the thumbnail selection screen are displayed as a slide show.

Buttons for slide show operation

Buttons	Description
RETURN	Return to the previous operation.
3D	Switch between 2D and 3D modes.
B button	Display “USB media menu”. • Select slide show interval • USB device removal
DISPLAY	Reveal/hide the guide display.

NOTE

- The selected background music (BGM) is played repeatedly.
- The slide show continues until you press **RETURN**.
- For setting the slide show speed, select “Select slide show interval” on the “USB media menu” screen.

■ USB media menu

● 3D display

You can view photos in 3D.

1 Press **B** to display the “USB media menu” screen.

2 Press ▲/▼ to select “3D display”, and then press **ENTER**.

3 Press ◀/▶ to select “On”, and then press **ENTER**.

NOTE

- In 3D mode, you cannot rotate the photos.
- You can select “3D display” from “USB media menu” only when the thumbnails screen for the photo mode in USB mode is displayed on the screen.

● Select slide show interval

Specify the length of time before the next image appears.

1 Press **B** to display the “USB media menu” screen.

2 Press ▲/▼ to select “Select slide show interval”, and then press **ENTER**.

3 Press ▲/▼ to select “10sec”, “30sec” or “60sec”, and then press **ENTER**.

NOTE

- Depending on the photo files, the length of the slide show interval may differ from the selected interval time.

● Select slide show Background music (BGM)

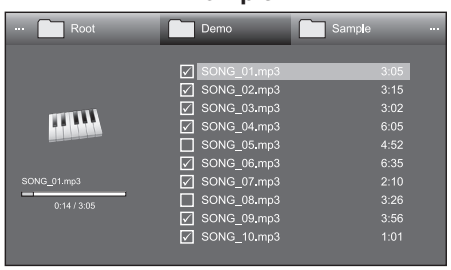
You can select the music to be played in the background while the slide show is being displayed.

1 Press **B** to display the “USB media menu” screen.

2 Press ▲/▼ to select “Select slide show BGM”, and then press **ENTER**.
- The list screen is displayed.
- You can display the list screen by pressing **G** when setting “Folder display setting” to “All”.

3 Select the music.
- Checkmarks are added to the selected music.

Example



4 Press **RETURN** to display the thumbnail selection screen, and then press **Y** to start the slide show and the background music.

Buttons for slide show background music (BGM) select operation

Buttons	Description
ENTER	When selecting a music file: Play music.
▲/▼/◀/▶ (Cursor)	Select a desired item.
RETURN	When music is stopped: Return to the previous operation. When music is being played: Stop music.
R button	Select/deselect items (✔ mark appears on the selected items).
G button	All*: Stop music. Folder*: Move to the parent folder.
Y button	Play/pause music.
B button	Display “USB media menu”. • Set all Background music (BGM) • Reset all Background music (BGM) • USB device removal

* The mode selected in “Folder display setting” on page 85.

NOTE

- All of the music files are selected by default.

● Set/Reset all slide show image

Set or reset the images to be displayed.

1 Press **B** to display the “USB media menu” screen.

2 Press ▲/▼ to select “Set all slide show image” or “Reset all slide show image”, and then press **ENTER**.
- When you select “Set all slide show image”, checkmarks are added to all the images.
- When you select “Reset all slide show image”, remove all the checkmarks from all the images.

Example

3 Press **Y** to start the slide show.

NOTE

- If no images have been selected, “Cannot display the data” is displayed and the slide show does not start.

● USB device removal

Set or reset the images to be displayed.

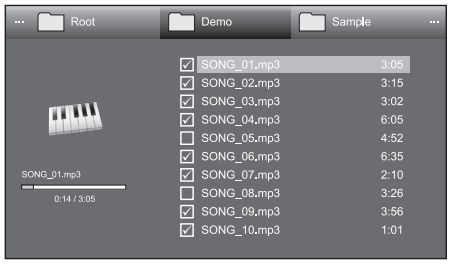
1 Press **B** to display the “USB media menu” screen.

2 Press ▲/▼ to select “USB device removal”, and then press **ENTER**.

3 Press ◀/▶ to select “Yes” or ”No”, and then press **ENTER**.
- When you select “Yes”, the USB device can be safely removed.

Music mode

Example



Buttons for music mode

Buttons	Description
ENTER	When selecting a music file: Play music.
▲/▼/◀/▶ (Cursor)	Select a desired item.
RETURN	When music is stopped: Return to the previous operation. When music is being played: Stop music.
R button	Select/deselect items (✔ mark appears on the selected items).
G button	All*: Stop music. Folder*: Move to the parent folder.
Y button	Play/pause music.
B button	Display “USB media menu”. • Set all auto play • Reset all auto play • USB device removal

* The mode selected in “Folder display setting” on page 85.

NOTE

- Only compatible file formats are displayed.
- The displayed play time may differ slightly from the actual play time depending on the files.

■ USB media menu

● Set/Reset all auto play

Set or reset the music to be played back.

1 Press **B** to display the “USB media menu” screen.

2 Press ▲/▼ to select “Set all auto play” or ”Reset all auto play”, and then press **ENTER**.

- When you select “Set all auto play”, checkmarks are added to all the music files.
- When you select “Reset all auto play”, remove all the checkmarks from all the music files.

3 Press **Y** to play back the music.

NOTE

- If no music files have been selected, “Cannot playback the audio file” is displayed and the music is not played back automatically.
- See page 87 for details on the “USB device removal” function.

Video mode

Example

Buttons for file selecting operations

Buttons	Description
ENTER	When selecting a folder icon: Enter this directory. When selecting a video file: Play the video.
▲/▼/◀/▶ (Cursor)	Select a desired item.
RETURN	Return to the previous operation.
R button	Select/deselect items (✔ mark appears on the selected items).
G button	All*: - Folder*: Move to the parent folder.
B button	Display “USB media menu”. • Set all auto play • Reset all auto play • USB device removal

* The mode selected in “Folder display setting” on page 85.

Buttons for playing mode

Buttons	Description
ENTER	When video is being played: Pause the video. When video is paused: Play the video.
▲ (Cursor)	Go to the beginning of a file by pressing ▲ once and the previous file by pressing ▲ twice.
▼ (Cursor)	Go to the next file.
◀/▶ (Cursor)	Reverse/fast forward a video.
RETURN	Go back to the file selection screen.
3D	Switch between 2D and 3D modes.
R button	Start playback from the previously stopped scene.
G button	Stop a video.
Y button	Display the USB control panel.
B button	Display “USB media menu”. • Title (edition) • Chapter • Show video information • USB device removal
0-9	Jump to scenes at 10% increments (0%–90%). • Limited to files without chapters.
DISPLAY	Reveal/hide the guide display.

NOTE

- Reverse/fast forward continues from one file to another during continuous playback.

■ Using the operation panel

You can use the operation panel for video playback operations.
You can call up this operation panel by pressing **CONTROL** on the remote control unit or selecting "Control (USB media)" from "Menu" → "Setup" →"Optioin" → "Option for view".

◀◀	Hold down to go in reverse.
▶	Starts playback.
▶▶	Hold down to fast forward.
⏮	Video without chapters: Press once to return to the previous playback point.* Press twice to return to the previous file. Video with chapters: Press once to return to the previous chapter. Press twice to return to the previous file.
⏸	Sets pauses and still pictures.
⏭	Video without chapters: Press once to advance to the next playback point.* Press twice to display the next file. Video with chapters: Press once to advance to next chapter. Press twice to advance to next file.
Audio	Change the audio when multiple audio is available for the video you are watching.
■	Playback stops.
(Subtitle)	Each time you press (Subtitle) on the remote control, the subtitle switches.
Title	Displays the title list.
Resume jump	Jump to the scene where playback was last stopped.

* During playback of a file without chapters, playback points are set automatically. Playback points are set at intervals of a one-tenth of playback time.
Example for a file with a playback time of 100 minutes: Playback points are set every 10 minutes. Pressing ⏭ once after viewing the file for 15 minutes jumps to the 20-minute playback point.

NOTE

- The key guide is shown when playback is resumed.
- Reverse/fast forward continues from one file to another during continuous playback in the USB media mode. (Jump forward/ back may not be available depending on the files in the home network mode.)

■ USB media menu

● Set/Reset all auto play

Set or reset the video to be played back.

1. Press **B** to display the "USB media menu" screen.
2. Press ▲/▼ to select "Set all auto play" or "Reset all auto play", and then press **ENTER**.
   - When you select "Set all auto play", checkmarks are added to all the video files.
   - When you select "Reset all auto play", remove all the checkmarks from all the video files.
3. Press **ENTER** to play back the video.

NOTE

- See page 87 for details on the "USB device removal" function.

● Title/Chapter

This function can be used for files without a title list or chapters. Select the title or chapter you want to play back.

1. Press **B** to display the "USB media menu" screen.
2. Press ▲/▼ to select "Title" or "Chapter", and then press **ENTER**.
3. Press ▲/▼ to select the desired title or chapter, and then press **ENTER**.
   - The selected title or chapter is played back.
   - "0-9" is displayed for files without chapters. Playback jumps to the playback point of the selected number.

NOTE

- If there is edition information, this screen is displayed when the title is selected.
- See page 87 for details on the "USB device removal" function.

● Show video information

The information of the current file is displayed.

1. Press **B** to display the "USB media menu" screen.
2. Press ▲/▼ to select "Show video information", and then press **ENTER**.

DivX® setup

This is the function to confirm your registration code. You need to register the code at http://www.divx.com.

1 Press **MENU** to display the menu screen.

2 Press ▼/◀/▶ to select “View setting”.

3 Press ▲/▼ to select “DivX ® setup”, and then press **ENTER**.

■ DivX® VOD registration

You can find your registration code on this menu. You need to register the TV at http://www.divx.com before playing the DivX content.

■ DivX® VOD deregistration

You can find your deregistration code on this menu. You need to deregister the TV at http://www.divx.com to release the registration.

List of file formats compatible with USB mode

USB device	USB Memory, USB card reader (Mass Storage class), USB hard disk drive
File system	FAT/FAT32/NTFS (USB hard disk drive only)
Photo file format	JPEG (.jpg) (DCF2.0 compliant) Multi-Picture Format (.mpo) (CIPA DC-007 Compliant)
Music file format	• MP3 (.mp3) Bitrate: 32 k, 40 k, 48 k, 56 k, 64 k, 80 k, 96 k, 112 k, 128 k, 160 k, 192 k, 224 k, 256 k, 320 kbps Sampling frequency: 32 k, 44.1 k, 48 kHz • FLAC (.flac) Bitrate: 128 kbps ~2304kbps Sampling frequency: 8k 16k, 22.05k, 24k, 32k, 44.1k, 48k, 88.2k, 96 kHz
Subtitle format	SRT/SUB/ASS/SSA/SMI

Video file format						
File extension	Container	Video decoder	Supported resolutions	Audio decoder	frame rate (fps)	bit rate (Mbps)
*.avi	AVI	DivX 3.11/4.x/5.1/6.0	1920×1080	MP3 Dolby Digital LPCM ADPCM DTS	30	40
		XviD	1920×1080		30	40
		H.264	1920×1080		30	40
		MPEG4	1920×1080		30	40
		Motion Jpeg	1280×720		30	40
*.mkv	MKV	DivX 3.11/4.x/5.x/6.0	1920×1080	MP3 Dolby Digital LPCM ADPCM DTS	30	40
		XviD	1920×1080		30	40
		H.264	1920×1080		30	40
		MPEG4	1920×1080		30	40
*.mp4** *.mov	MP4	H.264	1920×1080	MP3 AAC Dolby Digital Dolby Digital Plus	30	40
		MPEG4	1920×1080		30	40
		Motion Jpeg	1280×720		30	40
*.mpg *.mpeg	PS	MPEG2	1920×1080	Dolby Digital MPEG LPCM	30	40
		MPEG1	768×576		30	1.8
.rm/.rmvb	RM	RV8/9/10	1920×1080	Real Audio9/10	30	25
.wmv/.asf	ASF	DivX 3.11/4.x/5.1/6.0	1920×1080	MP3 Dolby Digital LPCM WMA	30	40
		Xvid	1920×1080		30	40
		MPEG4	1920×1080		30	40
		VC-1	1920×1080		30	40
		Window Media Vedio v9	1920×1080		30	40

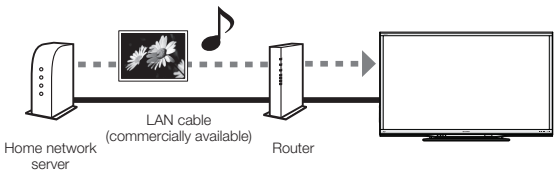
NOTE

- Progressive format jpeg files are not supported.
- USB 1.1 devices may not be played properly.
- Operation using USB hubs is not guaranteed.
- Video in Motion JPEG format with a resolution higher than 1280x720 may not be played back correctly.
- Some file formats in the above list may not be played back correctly (including images, sounds, subtitles, etc.).
- Depending on the bit rate, some files may not be played back.
- The TV supports DTS encoded video files instead of DTS surround sound formats.
- Some subtitles may not be displayed correctly and this may affect the TV operation.

** .mp4 files over 4GB are not supported.

Connecting a home network server

Connect the TV to the home network server using a LAN cable.



NOTE

- You can also connect a home network server by using a wireless LAN.
- To connect a home network server, refer to Home Network setup (See pages 76 to 77)
- Depending on the home network server, the TV may not be able to recognise the contained data.
- Do not disconnect a home network server from the TV while transferring files, when a screen is switching to another or before you exit “Home network” from the INPUT list.
- Do not connect and disconnect a home network server from the TV repeatedly.
- The software environment of the home network server is Windows 7 or Windows Media Player 12.
- Because of character restrictions, some file names may not display completely.

Playing back files on a home network server

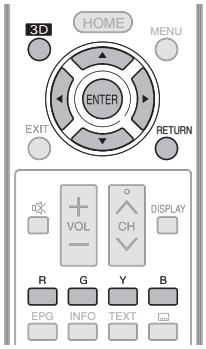
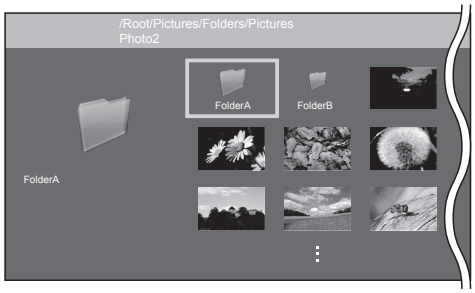


Photo mode

■ Viewing thumbnails

Example



Buttons for thumbnail operations

Buttons	Description
▲/▼/◀/▶	Select a desired item.
ENTER	When selecting a folder icon: Enter this directory. When selecting a photo thumbnail: Enlarge the photo.
RETURN	Return to the previous operation.
G	Move to the parent folder.
Y	Start the slide show.
B	Display the home network menu screen.

NOTE

- Only compatible file formats are displayed.
- You can see the file name, shooting date, file size and pixel size of the selected photo in the lower-left corner of the screen (shooting date is only available in the EXIF file format).

■ Viewing individual photos

The photo selected on the thumbnail selection screen is displayed.

Buttons for individual display operation

Buttons	Description
▲/▼/◀/▶	Go to the previous/next photo in the same directory.
RETURN	Return to the thumbnail selection screen.
3D	Switches between 2D and 3D modes.
R	Rotate the photo by 90 degrees to the left.
G	Rotate the photo by 90 degrees to the right.

NOTE

- Rotating photos only applies to the temporarily selected item and this setting is not saved.
- In 3D mode, you cannot rotate the photos.

■ Slide show

The photos displayed on the thumbnail selection screen are displayed as a slide show.

Buttons for slide show operation

Buttons	Description
RETURN	Return to the previous operation.
3D	Switches between 2D and 3D modes.
B	Display the home network menu screen.

NOTE

- The slide show continues until you press **RETURN**.
- For setting the slide show speed, display the home network menu screen.

■ Home network menu

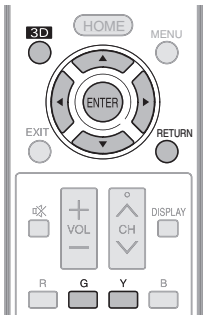
● Select slide show interval

Specify the length of time before the next image appears.

1. Press **B** to display the “Home network” menu screen.
2. Press ▲/▼ to select “10sec”, “30sec” or “60sec”, and then press **ENTER**.

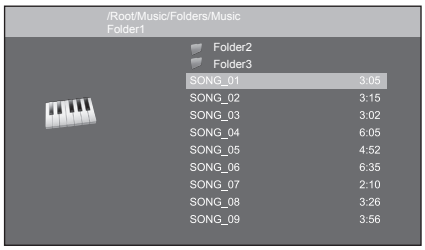
NOTE

- Depending on the photo files, the length of the slide show interval may differ from the selected interval time.



Music mode

Example



Buttons for music mode

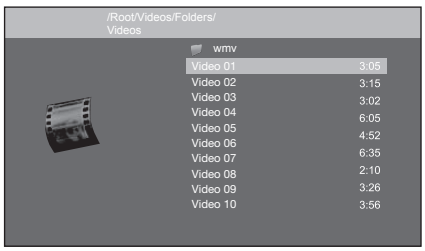
Buttons	Description
▲/▼/◀/▶	Select a desired item.
ENTER	When selecting a folder icon: Enter this directory. When selecting a music file: Play music.
RETURN	When music is stopped: Return to the previous operation. When music is being played: Stop music.
G	Move to the parent folder.
Y	Play music.

NOTE

- Only compatible file formats are displayed.
- The displayed play time may differ slightly from the actual play time depending on the files.

Video mode

Example



Buttons for file selecting operations

Buttons	Description
▲/▼/◀/▶	Select a desired item.
ENTER	When selecting a folder icon: Enter this directory. When selecting a video file: Play the video.
RETURN	Return to the previous operation.
G	Move to the parent folder.

Buttons for playing mode

Buttons	Description
▲	Go to the beginning of a file by pressing ▲ once and the previous file by pressing ▲ twice.
▼	Go to the next file.
◀/▶	Reverse/fast forward a video.*1
RETURN	Go back to the file selection screen.
ENTER	Play/Pause the video.
3D	Switches between 2D and 3D modes.
G	Stop a video.
Y	Display the home network control panel.*2

*1 Jump forward/back and Pause may not be available depending on the files.

*2 You can display this control panel by pressing **CONTROL** on the remote control or selecting "Control (Home network)" from "Option" → "Option for view". See page 89 for details on the operation panel. (Operation panel may be slightly different in home network mode because the screen image is for USB mode.)

List of file formats compatible with home network mode

Photo file format	JPEG
Music file format	LPCM, MP3
Video file format	MPEG2-PS, MPEG2-TS, WMV, ASF, MP4, MOV, AVI

NOTE

- Progressive format jpeg files are not supported.
- Some video file formats may not be played depending on the file or the server.
- WMV, ASF, MP4, MOV, AVI are non–Home network contents.

Selecting the picture size for video mode in USB and home network mode

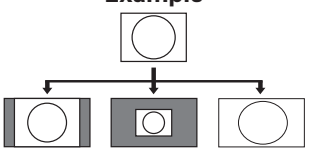
You can select the picture size in "Video mode".

1 Select "Video mode".
- Refer to **Select the files to play back** on page 85.

2 Press **WIDE**.
- The "Wide mode" menu displays.

3 Press **WIDE** or ▲/▼ to select the desired item.
- As you toggle the options, each is immediately reflected on the screen. There is no need to press **ENTER**.

Example



Selected item	Description
Auto	Keeps the original aspect ratio in a full screen display.
Original	Keeps the original aspect ratio and size.
Full	An image fully fills the screen.

Playing back files from a portable device or PC

With the remote playback function, you can use your portable device to playback pictures, video and music on the home network server.

- Please ensure that the TV and portable device or PC are in the same network environment, and set portable device as the server of TV.
  For the network setting of TV, please refer to pages 76 – 77.

Easy share setting

1. Press **MENU**, and then press ▼/◀/▶ to select “View setting”.
2. Press ▲/▼ to select “Network Setup”, and then press **ENTER**.
3. Press ▲/▼ to select “Easy share setting”, and then press **ENTER**.
4. Press ▲/▼ to select the specific adjustment item, and then press **ENTER** to set each item.

■ Set easy share permission

Before this function can be used, you need to set the TV to the status of being able to receive contents.

On: Receiving and playing contents from portable device or PC are allowed.
Off: Receiving contents from portable device or PC is not allowed.

■ Timeout Setup

This sets the time until the TV returns automatically to TV mode after remote playback ends.

10 sec./60 sec.: When the set time has elapsed after remote playback ends, the TV returns automatically to TV mode.
No: Select this to manually switch the TV after remote playback ends.

NOTE

- This function may not work while an Internet application is being used.
- Due to reasons including network environment, it may take some time for the TV to start playing after the dragging operation.
- If the wireless signals are too complicated, or multiple wireless access points are available, operations may not be performed properly due to signal interference.
- Some file formats may not match. For the file formats supported by this function, please see "List of file formats compatible with home network mode" on page 93.

Appendix

Troubleshooting

The problems described below are not always caused by malfunctions. Check the TV again before having the TV serviced.

Problem	Possible solution
• No power.	• Is the AC cord disconnected? (See page 19.) • Has the power been turned on? (See page 23.) • When the power switch does not work, remove the power plug and insert it again, and press **POWER** on the TV after waiting more than five seconds.
• Unit cannot be operated.	• External influences such as lightning, static electricity, etc., may cause improper operation. In this case, operate the unit after first turning the power off the TV or unplugging the AC cord and re-plugging it in after 1 or 2 minutes.
• Remote control unit does not operate.	• Are batteries inserted with polarity (+, −) aligned? (See page 22.) • Are batteries worn out? (Replace with new batteries.) • Are you using it under strong or fluorescent lighting? • Is a fluorescent light shining on the remote control sensor?
• Picture is cut off.	• Is the image position correct? (See page 43.) • Are screen mode adjustments such as picture size made correctly? (See pages 38, 39, 71 and 93.)
• Strange colour, light colour, or dark, or colour misalignment.	• Adjust the picture tone. (See pages 41 to 43.) • Is the room too bright? The picture may look dark in a room that is too bright. • Check the colour system setting. (See pages 29 and 63.) • Check the “HDMI auto view” setting. (See page 61.)
• Power is suddenly turned off.	• The unit's internal temperature has increased. Remove any objects blocking the vent or clean. • Check the “ECO” setting. (See pages 37 and 38.) • Is the sleep timer, no signal off or no operation off set? (See page 38.)
• No picture.	• Is the connection to external equipment correct? (See pages 20 and 21.) • Is the correct input selected? (See page 62.) • Is the picture adjustment correct? (See pages 41 to 43.) • Is the antenna connected properly? (See page 19.) • Is “On” selected in “Audio only”? (See page 32.) • Refer to "Picture/Audio test" (See page 97.)
• No sound.	• Is the volume too low? (See page 27.) • Make sure that headphones are not connected. (See page 17.) • Refer to "Picture/Audio test". (See page 97.)
• The TV sometimes makes a cracking noise.	• This is not a malfunction. This happens when the cabinet slightly expands and contracts according to changes in temperature. This does not affect the TV's performance.
• Cannot select the desired channel.	• Switch between Digital TV and Analogue TV modes. (See page 48.)
• Cannot connect to the Network	• Is the LAN cable connected correct (See page 76.) • Check the “LAN setting”.

Troubleshooting - Digital broadcasting

Problem	Error code	Possible solution
• No picture or no sound.	—	• Is the correct Input source selected? (See page 62.)
• Block noise appears on the screen.		• Is the antenna pointing in the correct direction? • Check the “Signal strength” and “Quality”. (See page 24.) • Are physical objects blocking the antenna? • Is the antenna or antenna cable compatible with D-TV broadcast?
• D-TV broadcasts cannot be received.	**E202**	• Is the D-TV antenna set up properly? • Is the antenna cable connected properly? (See page 19.) • Is the channel settings correct? (See page 24.)
• A specific channel cannot be received.	—	• Check the “Signal strength” and “Quality”. (See page 24.)
• No broadcast now	**E203**	• Check the current broadcast.

Troubleshooting - 3D images

Problem	Possible solution
• 3D images are not displayed.	• Is “3D auto change” set to “Off”? Press **3D** to switch to 3D mode. • If “3D auto change” is set to “Mode1” or “Mode2” but no 3D images are displayed, check the display format of the content being viewed. Some 3D image signals may not be recognised as 3D images automatically. Press **3D** to select the appropriate display format for the 3D image. • Is the power of the 3D glasses turned on? • Are the 3D glasses set to 2D mode? • Is there an obstacle between the 3D glasses and the TV, or is something covering the infrared receiver on the 3D glasses? The 3D glasses operate by receiving a signal from the TV. Do not place anything between the 3D infrared emitter on the TV and the infrared receiver on the 3D glasses.
• Non-3D images switch to 3D images automatically.	• Is “3D auto change” set to “Mode2”? If yes, the TV may misjudge non-3D content as 3D content. In this case, go to “Menu” → “Setup” → “Option” → “3D setup” → “3D auto change” and select “Mode1” or “Off”.
• The 3D glasses turn off automatically.	• Is there an obstacle between the 3D glasses and the TV, or is something covering the infrared receiver on the 3D glasses? The 3D glasses turn off automatically after 10 minutes if no signal is received from the TV. Do not place anything between the 3D infrared emitter on the TV and the infrared receiver on the 3D glasses.
• Pressing the power button on the 3D glasses does not cause the LED light to light.	• Is the battery in the 3D glasses exhausted? If the LED light does not light after turning on the power, the battery is exhausted. Please purchase new battery to replace.

3D glasses lenses

- Do not apply pressure to the lenses of the 3D glasses. Also, do not drop or bend the 3D glasses.
- Do not scratch the surface of the lenses of the 3D glasses with a pointed instrument or other object. Doing so may damage the 3D glasses and reduce the quality of 3D images.
- Use only a soft cloth to clean the lenses.

3D glasses infrared receiver

- Do not allow the infrared receiver to become dirty, and do not attach stickers to or otherwise cover the infrared receiver. Doing so may prevent the receiver from operating normally.
- If the 3D glasses are affected by other infrared data communication equipment, 3D images may not be displayed correctly.

Caution during viewing

- Do not use devices that emit strong electromagnetic waves (such as cellular phones or wireless transceivers) near the 3D glasses. Doing so may cause the 3D glasses to malfunction.
- The 3D glasses cannot operate fully at extreme high or low temperatures. Use them within the specified usage temperature range.
- If the 3D glasses are used in a room with fluorescent lighting (50/60 Hz), the light within the room may appear to flicker. In this case, either darken or turn off the fluorescent lights when using the 3D glasses.
- Wear the 3D glasses correctly. 3D images will not be correctly visible if the 3D glasses are worn upside down or back-to-front.
- Other displays (such as computer screens, digital clocks, and calculators) may appear dark and difficult to view while wearing the 3D glasses. Do not wear the 3D glasses when watching anything other than 3D images.
- If you lie on your side while watching the TV with 3D glasses, the picture may look dark or may not be visible.
- Be sure to stay within the viewing angle and optimum TV viewing distance when watching 3D images. Otherwise, you may not be able to enjoy the full 3D effect.
- The 3D glasses may not work properly if there is any other 3D product or electronic device turned on near the glasses or TV. If this occurs, turn off the other 3D product or electronic device or keep the device as far away as possible from the 3D glasses.
- Stop using this product in any of the following situations:
  – When images consistently appear doubled while you are wearing the 3D glasses.
  – When you have difficultly perceiving the 3D effect.
- If the 3D glasses are faulty or damaged, stop using them immediately. Continued use of the 3D glasses may cause eye fatigue, headaches and illness.
- If you have any abnormal skin reaction, stop using the 3D glasses. In very rare instances, such reactions may be due to an allergic reaction to the coating or materials used.
- If your nose or temples become red or you experience any pain or itchiness, stop using the 3D glasses. Pressure caused by long periods of use may lead to such reactions and may result in skin irritation.
- You may not be able to use several menu items while you are watching the TV in 3D mode.
- You cannot use the 3D function in radio or data mode.

NOTE

- These 3D glasses are only for use with SHARP LCD TVs supporting 3D.

Cautions regarding use in high and low temperature environments

- When the unit is used in a low temperature space (e.g. room, office), the picture may leave trails or appear slightly delayed. This is not a malfunction, and the unit will recover when the temperature returns to normal.
- Do not leave the unit in a hot or cold location. Also, do not leave the unit in a location exposed to direct sunlight or near a heater, as this may cause the cabinet to deform and the LCD panel to malfunction.
  Storage temperature: −20°C to +60°C.

Reset

If complex adjustments are made and the settings cannot be restored to normal, you can reset the settings to the factory preset values.

1 Press **MENU** and the MENU screen displays.

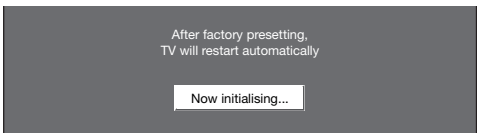
2 Press ▼/◀/▶ to select “View setting”.

3 Press ▲/▼ to select “Reset”, and then press **ENTER**.

4 If you have already set the password, enter it here.
- “Return to factory pre-settings” displays on the screen.

5 Press ◀/▶ to select “Yes”, and then press **ENTER**.
- “Now, TV will restart automatically. OK?” displays on the screen.

6 Press ◀/▶ to select “Yes”, and then press **ENTER**.
- “Now initialising...” displays on the screen and blinks.
- After the reset has completed, the power shuts off and then comes back on. The screen will have returned to its original settings.



7 Press ▲/▼ to select the desired language listed on the screen, and then press **ENTER**.
Press ◀/▶ to select “HOME” or “STORE”, and then press **ENTER**.

8 Press ◀/▶ to select “Digital Search” or “Analogue Search”, and then press **ENTER**.

9 The TV searches for, sorts and stores all the receivable TV stations according to their settings and the connected antenna.
- To abort the initial auto installation in progress, press **RETURN**.

NOTE
- When the TV is in “STORE” mode, repeat steps 1 to 7 to change to “HOME” mode.
- “Reset” is greyed out in 3D mode. To select the “Reset” menu, you need to switch to 2D mode.

Download setup

The TV automatically determines whether a new software version is available when the TV is in standby mode.
Go to “Menu” → “Setup” → “View setting” → “Individual setting” → “Standby search” → “Download setup”.

Selected item	Description
Yes	Automatically searches for new software updates available when the TV is in standby mode.
No	Does not search for update information.
Now	Checks if there is new software immediately.

Downloading the software

You can select the method of update.

1 If the software is updated, the confirmation message “New download information has been detected.” appears.
- If the TV receives the update service while in standby mode, a confirmation message displays after turning on the power.

2 Follow the screen prompts.

Selected item	Description
Yes	Starts downloading immediately. Typically, it takes approximately 30 minutes for download. You cannot carry out other operations while downloading. • Cancels the download by pressing **ENTER** on the remote control unit when “Discontinue” is displayed on the screen during the update.
No	Starts downloading automatically several minutes after entering standby mode.

NOTE
- Updating the software may take several hours in the worst case.
- The TV must remain in standby mode for download. Do not turn off the power.

Information

Picture / Audio test

When external equipment is connected with the TV powered on and there is no audio/video output, the TV may determine which equipment could cause a problem between the TV and the external equipment.
Go to “Menu” > “Setup” > “Information” > “ Picture / Audio test”.

Selected item	Description
Picture test	Perform a test for picture display. When external equipment is connected but the picture is not displayed, the test will be performed.
Audio test	Perform a test for audio playback. When external equipment is connected but the audio does not playback, the test will be performed.

NOTE
- Terminals which can be tested:
  HDMI, component, composite, D-sub
- External speakers cannot be tested. This function is available for the TV speakers only.

Message list

When a new broadcast station is detected, the message is updated in the “Message list” of the “Information” menu.

NOTE

- If there are unread messages in the “Message list”, “New information” is displayed on “Channel display”. (See page 27.)

Receiver report

Display reports regarding failures and changes for timer settings.

Identification

You can check the current version of the software on the screen.

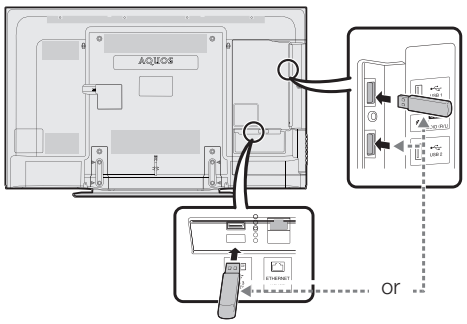
Updating your TV via USB/Network

This function allows you to transform to the latest software via a USB device.

1 Go to “Menu” → “Setup” → “Information” → “Software update”→ “USB update”.

- Also can transform to the latest software via network. Go to “Menu” → “Setup” → “Information” → “Software update”→ “Network update”, and follow the on-screen instructions.
- A broadband connection and network setup are required to update the software using the internet. (see page 76-77)

2 Insert the USB device containing the system data file and then press **ENTER**.



CAUTION

- Be sure to insert the USB device correctly into the terminal.

3 The TV displays a confirmation screen while checking the data in the inserted USB device.

CAUTION

- If the software is not compatible with the system, an error message appears on the screen. Repeat step 2 after pressing **ENTER**.
- When an error message displays, check to see if:
  - The USB device is inserted firmly.
  - The USB memory has two or more software files.
  - No software for updating the system exists in the USB memory.
  - The software file is broken.
  - The software file is not compatible with your TV’s software.
  - The current software is same as the updated software.
  - The USB device is not formated by FAT32 .

4 The TV displays the software version information after checking the data.

5 Press ◀/▶ to select “Yes” to update the system, and then press **ENTER**.

6 The TV restarts automatically, and the software updating will be completed.

- This operation may take a while.

CAUTION

- Version up may take several time according to network speed. Please do not turn off TV or execute other operations during version up.

Information on the software license for this product

Go to “Menu” → “Setup” → “Information” → “Software licence”.You can read the software licences in this menu.

Specifications

Item \ Model				LC-46LX650H	LC-52LX650H	LC-60LX650H
Resolution				2,073,600 pixels (1920 (H) × 1080 (V))		
Video colour system				PAL/SECAM/NTSC 3.58/PAL 60		
TV function	TV-Standard			PAL:B/G, D/K, I SECAM:B/G, D/K,K/K1 NTSC:M		
	Receiving channel	Digital		DMB-T/H		
		VHF/UHF		44.25-863.25 MHz		
		CATV		S1-S41ch (including Hyperband)		
	Digital terrestrial broadcast			470MHz-862MHz		
	STEREO/BILINGUAL			NICAM: B/G, I, D/K ; A2 stereo: B/G		
TV tuning system	Analogue			Auto preset 99 channel		
	Digital			Auto preset 999 channel		
Audio amplifier				10W x 2 (L / R)		
Speaker				(150 mm x 34 mm) x 2		
Terminals	Side	USB 1		USB 2.0		
		AUDIO OUTPUT/Headphones		Ø 3.5 mm jack		
		USB 2		USB 2.0		
		HDMI 1 (ARC)		HDMI (HDMI input) (480I, 576I, 480P, 576P, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz, 1080P/50Hz, 1080P/60Hz, 1080P/24Hz)		
		HDMI 2		HDMI (HDMI input) (480I, 576I, 480P, 576P, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz, 1080P/50Hz, 1080P/60Hz, 1080P/24Hz), AUDIO in (shared usage with PC) (Ø 3.5 mm jack)		
		HDMI 3		HDMI (HDMI input) (480I, 576I, 480P, 576P, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz, 1080P/50Hz, 1080P/60Hz, 1080P/24Hz)		
		HDMI 4/MHL		HDMI (HDMI input) (480I, 576I, 480P, 576P, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz, 1080P/50Hz*, 1080P/60Hz*, 1080P/24Hz) (*MHL is not applicable)		
	Rear	INPUT5		AUDIO in , COMPONENT in (480I, 576I, 480P, 576P, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz)		
		INPUT6/INPUT7		VIDEO in, AUDIO in		
		RS-232C		9 pin D-Sub male connector		
		PC		15 pin mini D-sub, AUDIO in (shared usage with HDMI2) (Ø 3.5 mm jack)		
	Underside	USB 3 (HDD)		USB 2.0		
		LAN (ETHERNET (10/100))		Network connector		
		Analogue antenna		UHF/VHF 75 Ω Din type		
		Digital antenna		UHF/VHF 75 Ω Din type		
		DIGITAL AUDIO OUTPUT		Optical Digital audio output		
		HDMI2/PC AUDIO INPUT (L/R)		Ø 3.5 mm jack*1		
OSD language				English/Simplified Chinese/Traditional Chinese		
Power requirement				AC 110–240 V, 50 Hz		
Power consumption (Standby)				120W (0.3W)	145W (0.3W)	188W (0.3W)
Weight	Without stand			17.0kg	21.5kg	25.5kg
	With stand			20.0kg	24.5kg	30.5kg
Operating temperature				0 °C to + 40 °C		

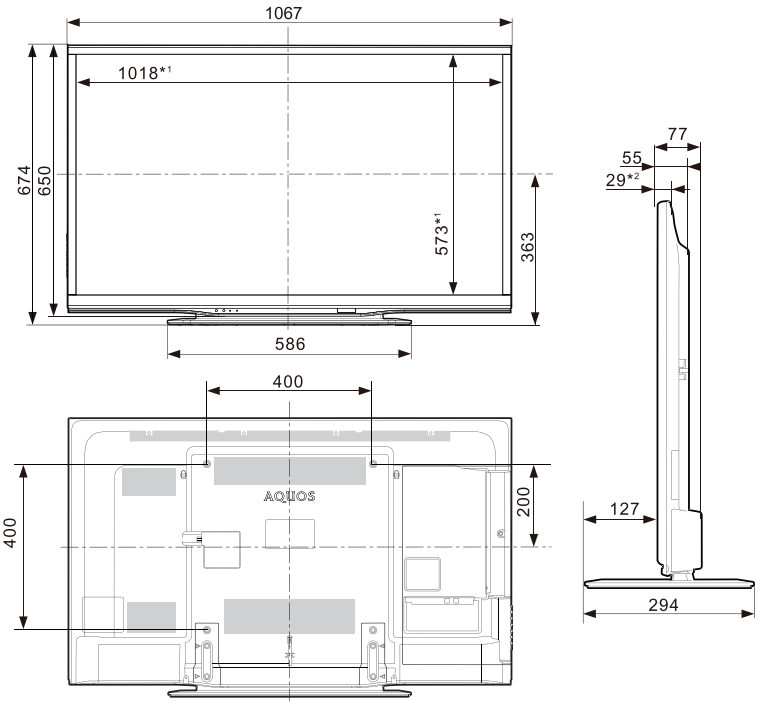
• As a part of policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice.

*1 The HDMI 2 and PC terminals share the same audio input terminal.

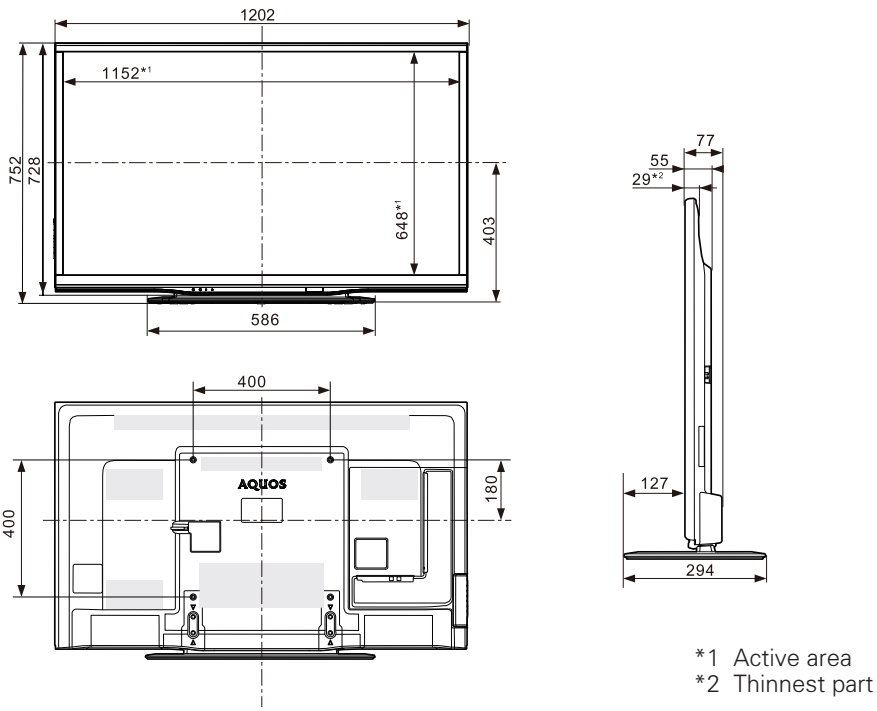
Dimensional drawings

Unit: mm

LC-46LX650H

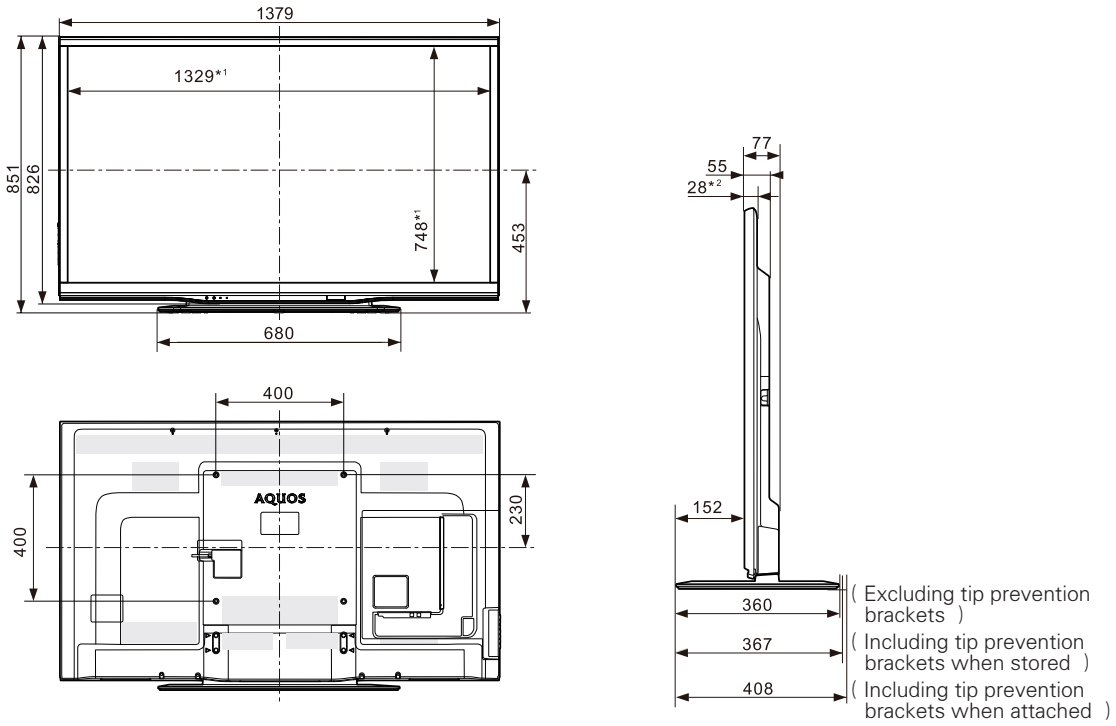


LC-52LX650H



*1 Active area
*2 Thinnest part

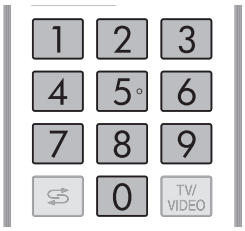
LC-60LX650H

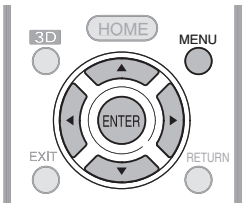


*1 Active area
*2 Thinnest part

Clearing the password

If you forget your password, clear the password using the following procedure.





1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Setup”.

3 Press ▼/◀/▶ to select “View setting”.

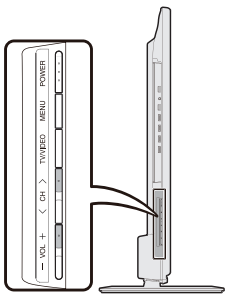
4 Press ▲/▼ to select “Individual setting” and then press **ENTER**.

5 Press ▲/▼ to select “Password”, and then press **ENTER**.

6 The password input screen displays.

– – – –

7 Press and hold both **CH**∧ and **VOL** + on the TV simultaneously until the message appears on the screen.



NOTE

- To set the password again, refer to “Password setting for the child lock” on page 35 and follow the instructions.

The Password is | | | | | .

NOTE

- As a precautionary measure, make a note of your password above, remove it from this manual, and keep it in a familiar place.